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Farmed Salmon Price Monitoring Study

Economic and Commercial Analysis Report 97

Fisheries and Oceans Pêches et Océans

Canada

FARMED SALMON PRICE MONITORING STUDY

B.C. Salmon Farmers Association[1]

Market Analysis Group
Strategic Policy and Planning Directorate
Department of Fisheries and Oceans
Ottawa, Ontario
K1A 0E6

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1.0 INTRODUCTION

The North American seafood distribution system is quite complex compared to other food commodity groups. It has evolved to handle the large volumes that are only seasonally available from the wild fishery. The distribution system is typified by a small number of large distributors/wholesalers who then channel the produce through a larger number of smaller regional wholesalers. These smaller wholesalers physically deliver the product to the retail and restaurant establishments. However, seafood distribution is currently undergoing considerable changes as large volume buyers, such as retailers, rationalize their product purchasing.

The inherent complexity of the multi-layered distribution system for seafood means that price information can be extremely difficult to obtain and rationalize. For example, while world salmon prices declined 30% during 1989, consumer prices were maintained at previous levels. The distribution system absorbed the price decline and did not pass along the lower price to the consumer. This is critically important, because salmon is known to be quite price elastic (i.e., a price decline of 1% will create a greater than 1% increase in consumption). Any price decline at the consumer level will therefore assist in stimulating higher consumption of fresh salmon.

Farmed salmon offers the potential to change the manner in which fresh salmon is distributed compared to other seafood products. Canada produced over 20,000 tonnes of farmed salmon in 1990 and can now supply the market on a consistent weekly basis. The larger production volumes can result in significant economies of scale in distribution and sales.

Optimization of the existing distribution system is now more important as lower farm-gate prices force producers and major first receivers to find ways of maximizing their return on sales. At the same time, there is a need to better define what the typical mark-up is at various levels in the distribution system. There is an inherent reluctance on the part of the existing system to report their buying and selling prices of fresh salmon. The consumer price at the retail level is useful for an end-point but does not provide any insights into what the various mark-ups are in the distribution system.

Obtaining such information can be helpful in designing any marketing program initiated by the salmon farming industry in the future. A more formal price reporting system at key levels in the distribution system will provide valuable insights into the typical mark-ups of the product as it moves through the distribution system and allow the salmon farming industry to better evaluate its current distribution and pricing strategies. The price reporting system will also effectively communicate what the price of salmon is at different points in the distribution system.

2.0 OBJECTIVES

The objectives of this study are as follows:

1) To identify at which levels in the seafood distribution system and in which geographic centres price data on fresh salmon products can be potentially collected.

2) To test and evaluate various price monitoring methodologies in different geographic centres to determine which ones are most feasible to use on an on-going basis.

3) To further test the optimal price collection methodologies for a period of two months.

4) To determine relevant price ratios and mark-ups through the distribution system.

These objectives are each addressed in separate sections of this report.

3.0 IDENTIFICATION OF PRICE COLLECTION POINTS IN THE DISTRIBUTION SYSTEM

3.1 Overview of the Fresh Salmon Distribution System

The seafood distribution system is quite complex, having historically evolved to handle the huge volumes of seafood products which are only seasonally available from the capture fisheries of the world. This has resulted in a multitude of players in the seafood distribution system, ranging from "one man and a telephone" brokers all the way to the multi-million dollar broadline distributors servicing seafood as well as meat products to the large retail and food service accounts.

The primary distribution paths for Canadian fresh salmon products are shown in Exhibit 3.1. Since there are limited import restrictions on fresh Canadian salmon products to the United States, the U.S. is considered a domestic market in the following discussion.

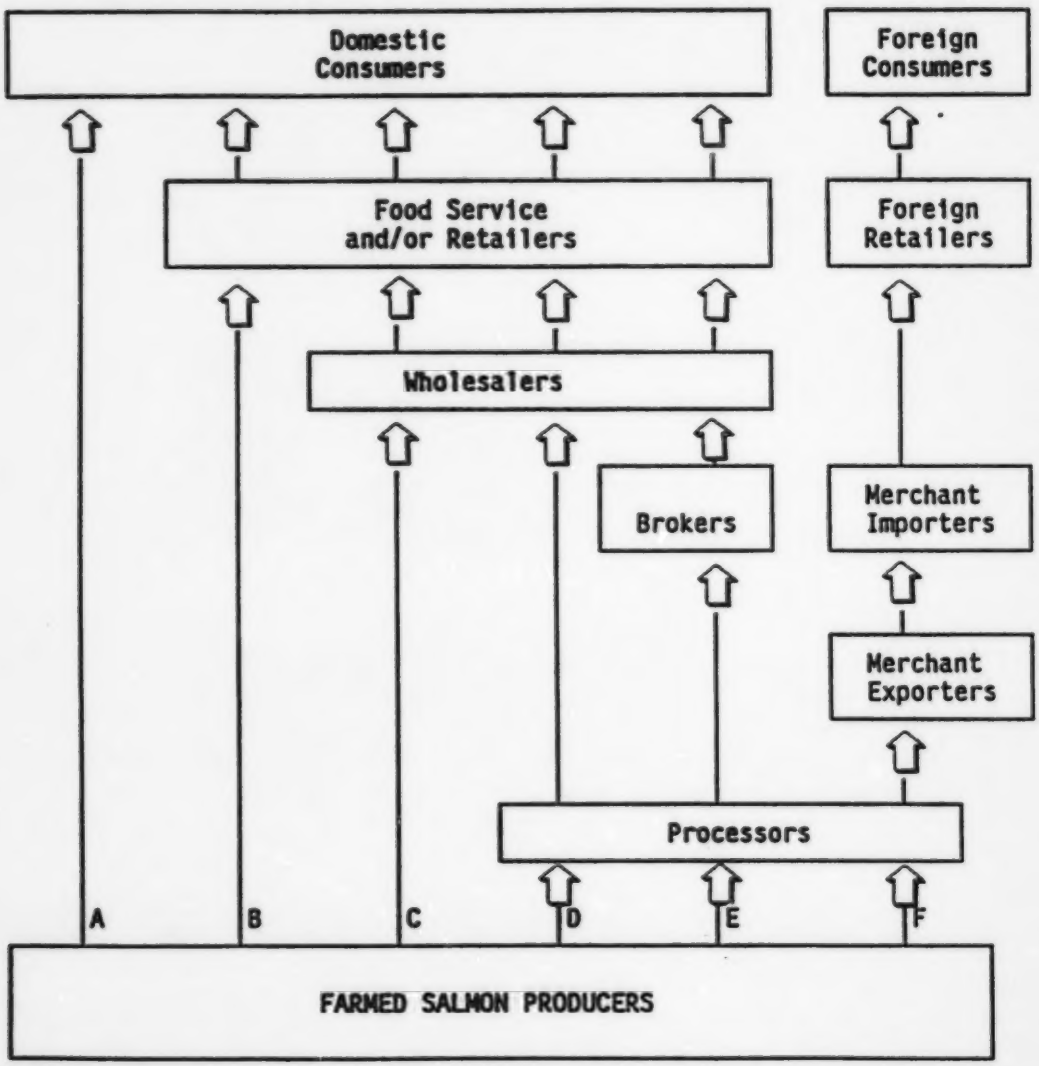
The wide variety of middlemen in the distribution system exist because seafood, being a perishable commodity, may be a very risky food product to move great distances. Middlemen function to absorb some of this risk. The major players in Exhibit 3.1 are described below.

1) Farmed Salmon Producers

The salmon farming industry in Canada has undergone tremendous growth in recent years. Canada now produces over 20,000 tonnes of farmed Atlantic and Pacific salmon. British Columbia produced a total of 14,000 tonnes in 1990 while New Brunswick produced 7,000 tonnes.

The industry in British Columbia is now dominated by eight large companies that produce about 75% of the industry's output. Production in New Brunswick is similarly concentrated, with three companies also comprising about 85% of the East Coast's output. These companies are listed in Exhibit 3.2. Seven of these eleven companies have a sales staff fully integrated into their companies. This has been done in order to allow large salmon farming companies to effectively sell directly to the upper levels of the distribution system and eliminate the commission paid to brokers and other intermediary levels of the distribution system.

EXHIBIT 3.1: CHANNELS OF DISTRIBUTION FOR FRESH AND FROZEN SALMON



SOURCE: The DPA Group Inc, Market Production Strategy for B.C. Farmed Salmon, 1986

EXHIBIT 3.2: MAJOR SALMON FARMING COMPANIES IN CANADA

British Columbia

B.C. Packers Ltd.*
Consolidated General Sea Harvest Corp.*
Hardy Sea Farms Inc.Ibec Aquaculture Corp
Pacific Aqua Foods Ltd.*
Pacific National Group Ent. Ltd.
Scanmar Seafoods Ltd.Sea Farm Canada*

New Brunswick

Atlantic Silver Ltd.*
Connors Brothers Ltd.*
Sea Farm Canada*

* Designates Company Performs Their Own Sales Function

2) Processors

Processing companies are those companies which clean, dress and box fresh salmon. If necessary, they can freeze and store it. Processing companies can perform secondary processing of the product into steaks and fillets, and portions. Some processors are large, diversified companies employing a sales staff. Other are "Custom Processors" and perform processing for other large processors or salmon framing companies who in turn make the first sale into the marketplace.

3) Wholesalers

Wholesalers are companies which take physical possession of the goods. They typically have distribution centres for additional processing, repacking, secondary processing, warehousing, and ultimate delivery to the customer. They therefore have one or more refrigerated trucks for delivery within their geographic area served. Some large wholesalers in major seafood distribution centres can be considered as being regional wholesalers. One of their functions is to sell to other wholesalers in local centres who in turn distribute directly to restaurants and retail stores.

Wholesalers can vary in size from a small one or two man operation with a cooler and refrigerated truck to the billion dollar "broad-liners" that operate sophisticated temperature-controlled trucks with dry, refrigerated and frozen compartments. These companies are beginning to include large meat wholesalers/distributors and large food corporations such as Sysco and PYA/Monarch Foods. Margins vary widely for wholesalers depending on the product and volume, but 15% to 20% is typical.

4) Brokers

Brokers, in contrast to wholesalers, do not take title to or physical possession of the goods. However, brokers usually perform all the other functions an employed sales staff does. Brokers contact wholesalers, retailers, etc. to make sales, coordinate shipments, handle complaints, and provide information to both the suppliers and buyers. They may also make credit checks and collect accounts. Brokers typically service a wide geographic area.

Brokers work entirely on a commission basis and usually collect between 5% to 10% of the selling price he is able to obtain for the shipment. Since brokers do not take physical possession of the shipment, their risk is low, with the exception of ensuring the safe passage of the shipment to the buyer.

5) Exporters

Exporters may buy goods directly from a salmon farming or processing company, or sell on a commission basis. Salmon farming companies, processors or trading companies may all act as exporters to markets such as the U.S. or Japan. They may sell to importers, but are more likely to sell directly to wholesalers if the export market is near.

6) Importers

Importers are simply the individual or company that takes first possession of seafood when sold to countries like the U.S. or Japan. They may buy the goods directly for a predetermined price or sell on a commission basis. They normally assume the role of brokers in that they do physically handle and distribute the product themselves.

3.2.0 Possible Points of Price Collection in the Distribution System

Price collecting and reporting is conducted for several important reasons:

1) To provide prospective sellers and buyers with some idea of what the prevailing price for the product is at a particular distribution system level at a given point in time.

2) To rationalize the current mark-ups at different points in the distribution system and to identify when and where excessive mark-ups occur.

3) To provide industry with a an averaged price over a weekly period with which to measure overall economic performance of the industry in terms of total value of product sold.

There are several requirements for a price reporting system to be successful:

1) The price data obtained must be of use to the major client groups

2) Prices must be obtained at a well-defined point in the distribution system in order to allow for any averaging or comparing of them.

3) Prices must be obtained on a timely basis.

Exhibit 3.1, which shows the generalized distribution options for fresh Canadian salmon also shows the various points in the distribution where price information can be obtained. Section 4.0 will document the various methods and points in the distribution system from which fresh salmon price collection was attempted.

3.3 Selection of Cities for Price Monitoring

The six cities selected for obtaining price and distribution information are:

1) Vancouver
2) Toronto
3) Seattle
4) San Francisco
5) Los Angeles
6) Chicago

These cities were selected based on the known distribution of B.C. farmed salmon to them from a study conducted in 1990[1]. The study quantified the major geographic markets of the product in 1989. As indicated in Exhibit 3.3, each city selected already has a significant level of consumption of the product and therefore have existing distribution systems established to serve them.

The emphasis on West Coast cities is due to the fact that 50% of total production is retained in this area. California is the largest single market for the product, with over 30% of B.C. farmed salmon production exported to this state. Los Angeles and San Francisco are the two cities receiving the majority of this.

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[1] Current Developments in World Salmon Markets: Implications for the Canadian Salmon Farming Industry, Department of Fisheries and Oceans, ECAR 46. B.C. Salmon Farmers Association, 1990.

Seattle is a major distribution point for B.C. farmed salmon, with nearly all U.S. shipments coordinated from this city. The city also has well-defined level of existing product consumption for both food service and retail. Chicago was selected because it is the primary distribution point for the central U.S. region.

Toronto was found to be the largest target market for B.C. farmed salmon in Canada next to British Columbia. Vancouver and the Lower Mainland region represents a large domestic market.

EXHIBIT 3.3: MONITORING CITY SELECTION FOR PRICE

Target City	Region	% of 1989 B.C. Farmed Salmon Production To Region
Vancouver	British Columbia	8.5%
Toronto	Ontario	7.0%
Seattle	Pacific Northwest	9.0%
San Francisco	Northern California	15.5%
Los Angeles	Southern California	17.4%
Chicago	Northeast Central	4.5%

Source: Current Developments in World Salmon Markets: Implications for the Canadian Salmon Farming Industry, Department of Fisheries and Oceans, ECAR 46. B.C. Salmon Farmers Association, 1990.

4.0 TESTING AND EVALUATIONS OF PRICE COLLECTION METHODOLOGIES

4.1 Overview

A variety of salmon price collection techniques were researched and evaluated in this study. A broad spectrum approach was used initially to examine and pre-test as many options as possible. Candidate methodologies were further researched and the most promising were eventually selected and tested over a three month period (July 1 - September 31, 1990). Exhibit 4.1 summarizes the various collection techniques studied.

EXHIBIT 4.1 SALMON PRICE COLLECTION METHODOLOGIES

---

1) B.C. Salmon Farmers Association Price and Volume Reporting System

2) Urner-Barry Publications Inc.

3) Other Price Reporting Systems
   a) U.S. National Marine Fisheries Service
      - Fishery Market News
      - Operation Price Watch
   b) Poultry Industry Monitoring Systems

4) Price Tracking
   - Following shipments of B.C. farmed salmon from farm-gate to end-user (i.e. the retail and food service sectors)

5) Retail In-Store Observations
   - Conducted by Neilson Market Research Inc.
   - Retail Price Telephone Survey

6) Newspaper Advertisement Collection

7) Food Service Price Survey

The methodologies for each individual price collection system will be expanded upon in the following sections. A number of "Price Tracking" exercises were designed and tested. The overall objective of these were to follow a B.C. farmed salmon shipment from farm-gate through the distribution system to the retail or food-service customer. This exercise is an essential step in defining the typical distribution paths of the product, the mark-ups at each point in the distribution system and the optimal points to collect price information.

A highlight of the methodology is the use of Neilson Marketing Research Inc., one of the largest market research companies in North America, to conduct in-store observations of the presence and price of B.C. farmed salmon in key target retail markets. Data on competitor's products was also obtained. This price collection methodology has never been attempted before for fresh salmon.

4.2 B.C. Salmon Farmers Association Price and Volume Reporting System

4.2.1 Methodology

The B.C. Salmon Farmers Association (BCSFA) initiated a farmed salmon price monitoring system as a service to its members in 1987. Major first receivers of B.C. farmed salmon report on a weekly basis the volumes of salmon harvested the week before and the prices they sold them at. First receivers are simply the first companies to receive the product directly from a salmon farm and who make the first sale of this salmon into the market place.

First receiver companies therefore include major fish processing companies who have processing and marketing arrangements with various salmon farms and large salmon farming companies who perform their own marketing function.

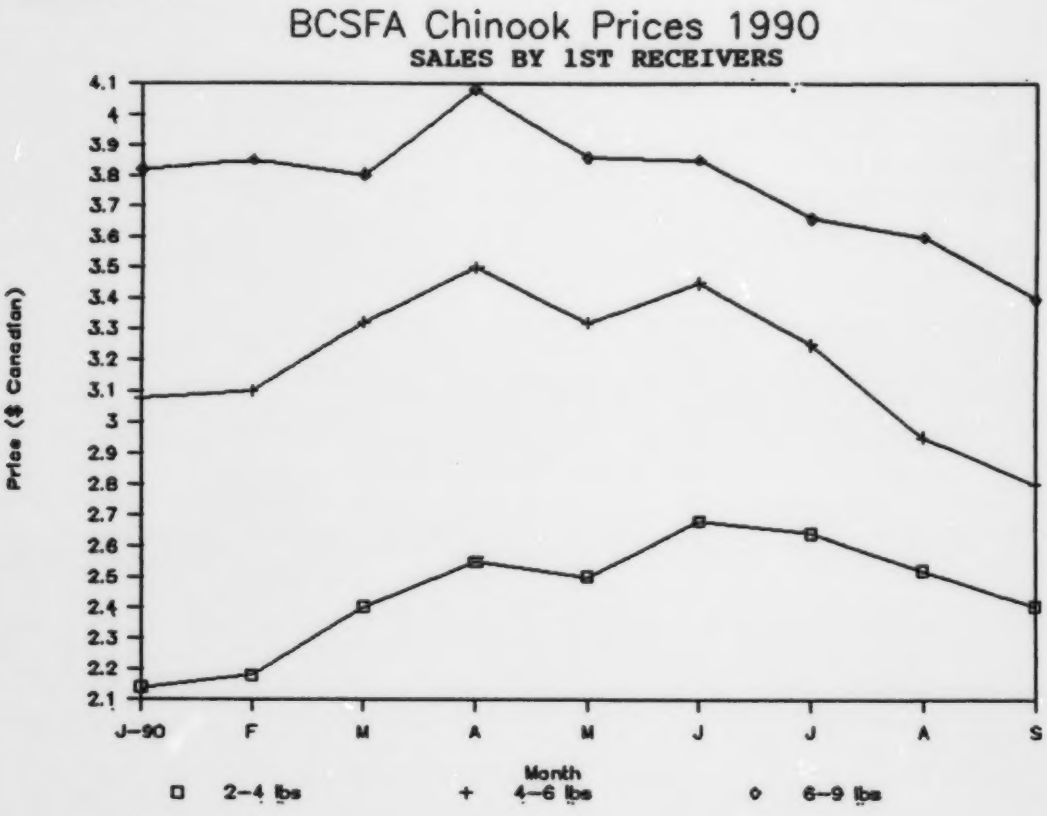
The price and volume report displays the aggregate totals of the farmed salmon volumes by size category as well as the averaged prices for the previous week. All price and volume information collected is treated in strictest confidence. No weekly reports are produced unless there are three or more companies reporting.

Prices are based on a dressed, boxed, FOB Vancouver price and includes the first receivers sales commission. This price therefore represents in effect the "export selling price" of first receivers into the market place. It provides a useful starting point in the price analysis for B.C. farmed salmon.

4.2.2 Results

Exhibit 4.2 shows the averaged BCSFA chinook prices by month for 1990 up until the end of September. Salmon prices collapsed worldwide in 1989 and were in the process of rebounding during the January through to June period. This exhibit shows how prices strengthened during the first half of the year. Prices peaked in April for 6-9 lbs at $4.10/CDN and also for 4 - 6 lb fish at $3.50/CDN. Prices then began to slide in May due to the onset of the Oregon troll fishery but firming in June. The opening of the B.C. commercial salmon fishery on July 1, 1990 precipitated another decline in prices through to the end of September. Chinook salmon dropped to $2.80/lb. for 4 - 6's and $3.40/lb. for 6 - 9's during September. B.C. farmed chinook prices in September for 4-6 and 6-9 lb fish therefore dropped 15% compared to the June prices.

EXHIBIT 4.2



SOURCE: B.C. Salmon Farmers Association
Price and Volume Reporting System

It was evident in 1989 that B.C. farmed salmon sold at or below the price for troll-caught salmon when it was available during the July to September period. The availability of large quantities of wild salmon during the summer months means that it will be very difficult for the B.C. salmon farming industry to escape this seasonal drop in prices for chinook salmon.

4.3 Urner Barry Publications Inc.

4.3.1 Background and Methodology

Urner Barry Publications Inc. was established in 1858 and has since that time reported price statistics on a variety of food commodities. The company has been gathering seafood statistics for the past 17 years and publishes a twice a week price sheet called "Seafood Price Current". It lists the first receiver prices for more than 100 species of seafood sold in the U.S..

Urner Barry prices are considered by people in the seafood industry to be significantly more accurate than any other U.S. seafood price monitoring system. They have gained credibility in recent years, particularly in the relative accuracy of the fresh salmon prices that they report. Prices are given as sales by first receivers in the various regions and in effect are broker or distributor selling prices.

For B.C. farmed salmon, prices are reported as being "Sales by First Receivers-Seattle", indicating that the prices reported are based on the Seattle selling price. Vancouver first receivers typically sell to Seattle-based distributors and brokers. The Urner Barry price therefore reflects the inclusion of transportation costs to Seattle plus the seller's sales commission, typically 5%-8%. Prices are given in U.S. dollars.

4.3.2 Results

Exhibit 4.3 shows the 1990 Urner Barry B.C. farmed chinook prices for the January to September period. The price trends are nearly the same when compared to the BCSFA Price and Volume Reporting System prices. The 6-9 lb prices increased during the first four months of the year, peaking in April at $3.70/U.S. The 4-6 lb size category increased marginally to about $3.10/U.S. and remained relatively stable for the January through to June period. Chinook in the 2 - 4 lb size were weak during January and February but strengthened in March to reach about $2.30/U.S. in May.

Urner Barry paralleled the BCSFA price trends in clearly showing how the July 1st, 1990 opening of the B.C. and Alaska commercial salmon fishery had a dramatic impact on depressing the prices of farmed salmon. Exhibit 4.4 compares the Urner Barry farmed and troll caught chinook prices for 1988 and 1989. It clearly shows how B.C. farmed salmon prices fall at or below the troll caught prices during the July through to September period. B.C. farmed salmon prices then rebounded from November, 1989 through to June, 1990 before again dropping 15% and below that of the troll prices.

EXHIBIT 4.3

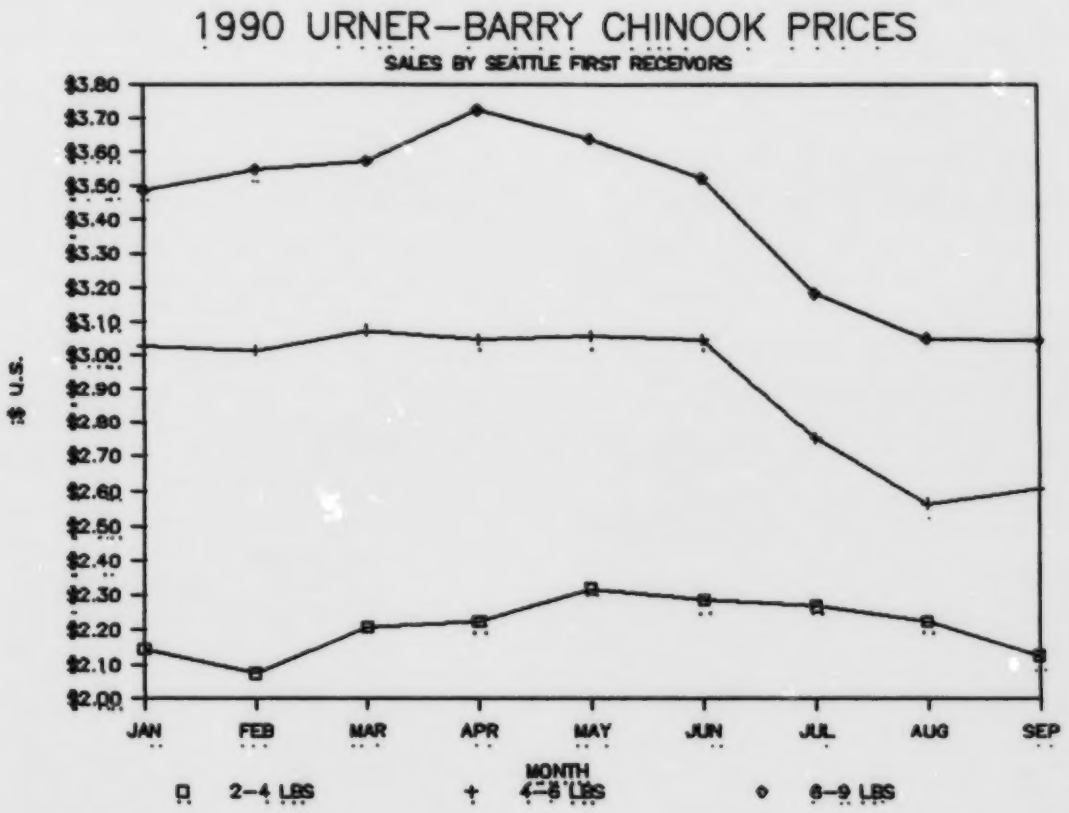

1990 URNER-BARRY CHINOOK PRICES
SALES BY SEATTLE FIRST RECEIVORS
$ U.S.
$3.80
$3.70
$3.60
$3.50
$3.40
$3.30
$3.20
$3.10
$3.00
$2.90
$2.80
$2.70
$2.60
$2.50
$2.40
$2.30
$2.20
$2.10
$2.00
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
MONTH
2-4 LBS
4-6 LBS
6-9 LBS

EXHIBIT 4.4

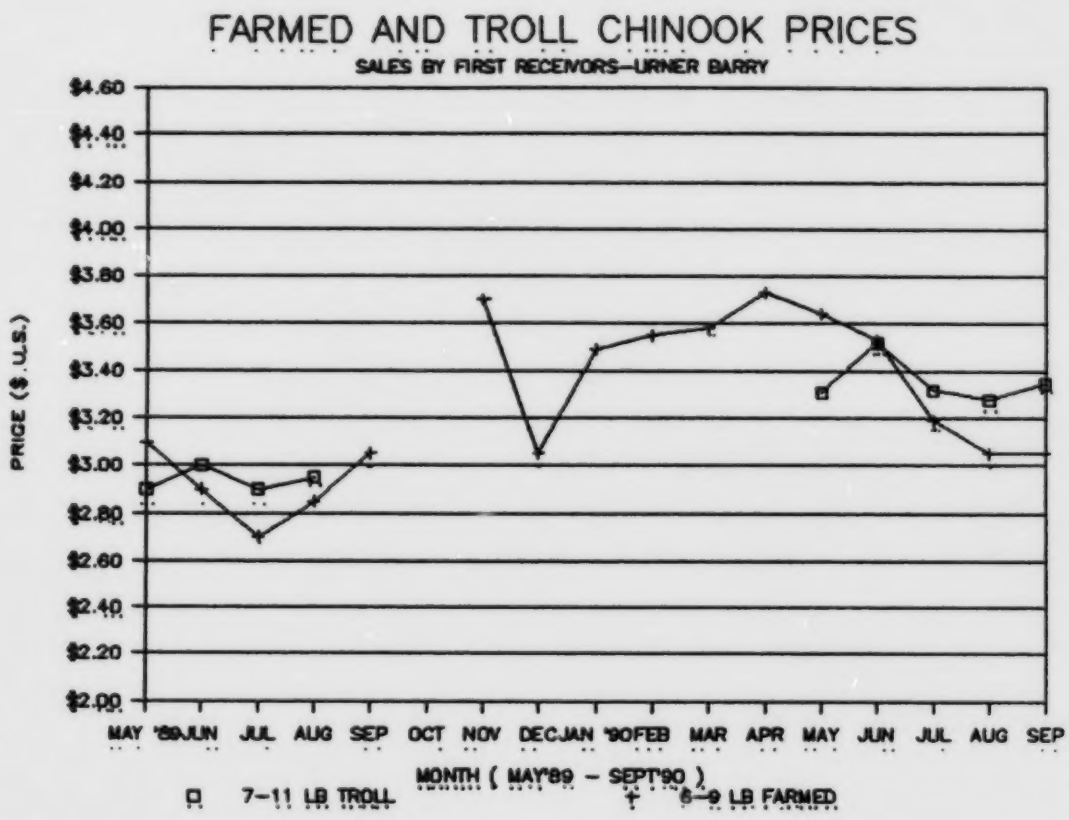

FARMED AND TROLL CHINOOK PRICES
SALES BY FIRST RECEIVORS–URNER BARRY
PRICE ($ U.S.)
$4.60
$4.40
$4.20
$4.00
$3.80
$3.60
$3.40
$3.20
$3.00
$2.80
$2.60
$2.40
$2.20
$2.00
MAY '89 JUN JUL AUG SEP OCT NOV DEC JAN '90 FEB MAR APR MAY JUN JUL AUG SEP
MONTH (MAY'89 – SEPT'90)
7–11 LB TROLL
8–9 LB FARMED

Exhibit 4.5 compares the Urner Barry and BCSFA prices for 4-6 lb farmed chinook salmon. Urner Barry prices have been changed to Canadian currency and adjusted to reflect an FOB Vancouver selling price. This was done by deducting 5 cents Canadian for transportation to Seattle and 6% sales commission off the Urner Barry price.This comparison shows how the two price reporting systems are in fact relatively close.

4.4 Evaluation of Other Price Reporting Systems

4.4.1 The U.S. National Marine Fisheries Service Operation Price Watch

The U.S. National Marine Fisheries Service (NMFS) initiated a seafood price monitoring system in 1973 called Operation Price Watch. This price reporting system was based on a monthly informal survey of retail prices and other items in three retail grocery stores in each of ten large U.S. cities. In-store surveys were conducted by NMFS personnel.

The survey schedule included 53 specifically designated items; 38 fish items and 15 other items - beef (5), pork (3), poultry (3), other (4). Prices were reported on a wide variety of fresh, frozen and canned seafood products. Price indexes were developed for fish, meat, poultry products based on a 1977 base value of 100%. This allowed for price comparisons of the three major protein sources over time.

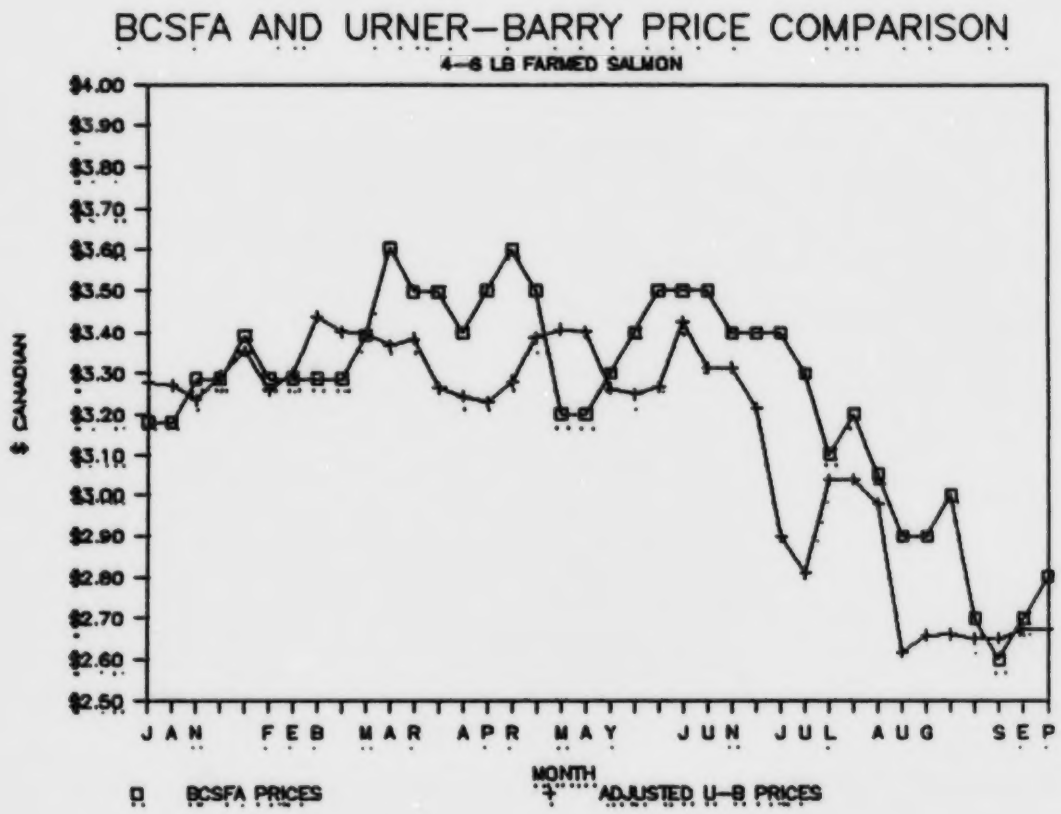
Operation "Price Watch" was the first concerted attempt to monitor seafood prices at the retail level. It provided a useful service to the seafood industry in tracking many products in a wide geographic area, allowing comparison of prices in different regions.

The price indexes comparison of seafood with other protein groups was also useful in indicating the price competitiveness of seafood relative to the other protein groups.The program was discontinued in 1987 due to funding restrictions for the program.

4.4.2 The U.S. National Marine Fisheries Service Fishery Market News Prices

The U.S. National Marine Fisheries Service had published, up until 1989, a weekly publication called Fishery Market News for the major fish distribution cities of the U.S.. These cities included Boston, New York, New Orleans, Los Angeles and Seattle. At present, only the Seattle based NMFS office publishes the Fishery Market News for the Pacific Northwestern States. The other cities' newsletters are being privatized. These reports provide a wide variety of useful market information including prices, reported landings and imports of various species of fish. The price information is reported typically as ex-vessel with wholesale prices sometimes also provided.

The relative accuracy of the NMFS prices are held in some question by most seafood industry analysts. The range in prices quoted in their reports are often so wide that they cannot provide a good sense of what the actual selling price of a particular seafood group is. While many people value the statistical imports and landings given in the reports, the prices are generally viewed as being only useful as an initial starting point for price level determination.


BCSFA AND URNER–BARRY PRICE COMPARISON
4–6 LB FARMED SALMON
$ CANADIAN
$4.00
$3.90
$3.80
$3.70
$3.60
$3.50
$3.40
$3.30
$3.20
$3.10
$3.00
$2.90
$2.80
$2.70
$2.60
$2.50
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
MONTH
BCSFA PRICES
ADJUSTED U–B PRICES

4.4.3 Poultry Industry Price Monitoring Systems

The poultry industry in the United States is now highlyconcentrated, with 8 of the more than 100 firms processing over half of the total volume. The largest of these companies (i.e., Tyson ConAgra, Perdue, Holly Farms) are completely vertically integrated in terms of hatcheries, grow-out farms, processing plants, marketing and sales. They also have extensive market intelligence gathering capabilities.

Nearly all large poultry companies have sales representatives that regularly go into retail stores and gather price information on their own and competitors products and prices. Newspapers are also used extensively for comparison purposes. Advertised specials on popular products such as poultry are often a "loss leader" in that large volumes of product are often bought and sold below the cost of the regular retail mark-up in order to attract customers.

Most large companies also use Neilson Marketing Research Ltd., which can provide a variety of retail price data under contract to these companies. Neilson has access to the scan data (i.e., the receipts from customers going through each booth in the store) and are able to use this information to measure volume of product moved through each store. Neilson also conducts in-store price monitoring services as well.

Large poultry companies devote considerable effort in gathering accurate retail price and product data in order for them to remain competitive and aware of what is occurring in the marketplace. The Agricultural Marketing Service in the U.S. has provided a weekly price reporting system for the poultry industry since 1983. It consists of a 12 city composite price that is weighted by the sales of whole-carcass products in various products. It provides poultry prices on a weekly basis.

4.5 Price Tracking

4.5.1 Methodology

This component of the study involved following shipments of B.C. farmed salmon from the farm-gate to the end user (i.e., the retail and food service sectors). The primary objective of this exercise is to better define the typical distribution channels of B.C. farmed salmon and also where price information should be collected in the distribution system. The price information generated from this study yielded valuable information on the current mark-ups within the fresh salmon distribution system.

The BCSFA utilized member companies that expressed an interest in this part of the study. These companies included large, vertically integrated salmon farming companies with their own sales arm, major processing companies and smaller salmon farming companies conducting their own sales. These companies were willing to provide the BCSFA access to typical distribution channels used, mark-ups at various level in the distribution chain and end point prices.

The BCSFA also utilized well established contacts in the cities selected for the study and included:

. Brokers
. Wholesalers
. Retail Store Chains
. Restaurants
. Food Promotion Agencies

By utilizing these existing contacts and further researching the links between major first receivers and end users, actual shipments of farmed salmon were followed through the distribution system and price information on the buying/selling prices obtained.

All information gathered in this manner was treated in strictest confidence. Only general block diagrams shown in the following exhibits are reported, with no company names affixed to any of them.

4.5.2 Results

The following exhibits (4.6 to 4.14) show price tracks that were conducted for each of the cities examined in this study. Each price track represents an actual shipment of salmon as it travelled through the distribution channel from first receiver to end user which was either retail, speciality fish stores, or restaurants. All prices are based on a 4-6 lb. dressed, head-on farmed chinook salmon.

The retail price tracks show that many retailers are now moving towards purchasing fresh salmon directly from first receivers, particularly in Vancouver, Toronto and Seattle. Most large retailers in Chicago, Los Angeles and San Francisco are still served by wholesalers. The sales commission of major first receivers was typically in the range of 6% - 8%. Their selling price would include transportation costs to a predesignated place (i.e., airport terminal, warehouse, etc.,).

Wholesalers play an essential role in the distribution system, particularly for customers in speciality fish stores and the hotel, restaurant and institutional sector. Their sales commissions were in the 20% - 25% range.

Final mark-ups by retailers varied based on if the salmon was an advertised special, in which case the typical mark-up was 25% - 40%. Regularly priced fresh, whole salmon prices were marked up typically between 40% - 65% on the price tracks performed. Speciality fish store mark-ups were found to be in the order of 40% - 50%.

Restaurant mark-ups were much more difficult to track, based on the difficulty in obtaining accurate purchase prices and the range in typical mark-ups for a salmon entre. An example of a San Francisco restaurant is given in Exhibit 4.14. Restaurants were found to use at least two wholesalers to supply them with product in order to ensure supply as well as price competitiveness.

EXHIBIT 4.6 VANCOUVER RETAIL PRICE TRACK

DAY	CITY	RECEIVER	BUYS (Prices in Canadian $)	SELLS	MARK-UP
Tuesday	Vancouver	First Receiver	$3.20	$3.40	6%
Tuesday	Vancouver	Large Retailer's Distribution Warehouse	$3.40	$3.40	0%
Wednesday	Vancouver	Retail Outlets	$3.40	$4.99	47%

EXHIBIT 4.7 VANCOUVER SPECIALITY FOOD STORE PRICE TRACK

DAY	CITY	RECEIVER	BUYS (Prices in Canadian $)	SELLS	MARK-UP
Tuesday	Vancouver	First Receiver	$3.20	$3.40	6%
Tuesday	Vancouver	Wholesaler	$3.40	$4.10	20%
Wednesday	Vancouver	Speciality Fish Store	$4.10	$5.99	46%

EXHIBIT 4.8 TORONTO RETAIL PRICE TRACK

DAY	CITY	RECEIVER	BUYS (Prices in Canadian $)	SELLS	MARK-UP
Wednesday	Vancouver	First Receiver AirFreight $0.35	$3.00	$3.55	18%
Thursday	Toronto	Large Retailer's Distribution Warehouse	$3.55	$3.55	0%
Friday	Toronto	Individual Retail Outlets	$3.55	$4.99 (Sale) $5.99 (Reg.)	33% 60%

EXHIBIT 4.9 TORONTO SPECIALITY FISH STORE

DAY	CITY	RECEIVER	BUYS (Prices in Canadian $)	SELLS	MARK-UP
Monday	Vancouver	First Receiver Air Freight $0.35	$3.20	$3.75	17%
Tuesday	Toronto	Wholesaler	$3.75	$4.50	20%
Wednesday	Toronto	Fish Speciality Store	$4.50	$6.30	40%

EXHIBIT 4.10 SEATTLE RETAIL PRICE TRACK

DAY	CITY	RECEIVER	BUYS	SELLS	MARK-UP
			(Prices in Canadian $)		
Wednesday	Vancouver	First Receiver Trucking $0.05/lb	$2.90	$3.15	7%
Thursday	Seattle	Large Retailer's Distribution Warehouse	$3.15	$3.15	0%
Friday	Seattle	Individual Retail Outlets	$3.15	$4.99 (Reg.) $3.99 (Sale)	58% 27%

EXHIBIT 4.11 CHICAGO RETAIL PRICE TRACK

DAY	CITY	RECEIVER	BUYS	SELLS	MARK-UP
			(Prices in Canadian $)		
Monday	Vancouver	First Receiver Trucking $0.10/lb	$2.80	$3.00	7%
Monday	Los Angeles	Distributor Trucking $0.10/lb	$3.00	$3.30	10%
Tuesday	Chicago	Wholesaler	$3.30	$4.00	21%
Wednesday	Chicago	Major Retailer	$4.00	$4.99 (Sale) $5.99 (Reg.)	25% 50%

EXHIBIT 4.12 LOS ANGELES RETAIL PRICE TRACK

DAY	CITY	RECEIVER	BUYS	SELLS	MARK-UP
			(Prices in Canadian $)		
Monday	Vancouver	First Receiver Trucking $0.05/lb	$2.90	$3.20	10%
Wednesday	Los Angeles	Wholesaler	$3.20	$3.90	22%
Thursday	Los Angeles	Major Retailer	$3.90	$4.99 (Sale) $5.99 (Reg.)	28% 54%

EXHIBIT 4.13 SAN FRANSISCO PRICE TRACK

DAY	CITY	RECEIVER	BUYS	SELLS	MARK-UP
			(Prices in Canadian $)		
Monday	Vancouver	First Receivers Trucking $0.10/lb	$2.80	$3.10	11%
Wednesday	San Fransisco	Wholesaler/ Distributor	$3.10	$3.70	20%
Thursday	San Fransisco	Major Retailer	$3.70	$4.99 (Sale) $5.99 (Reg.)	35% 62%

EXHIBIT 4.14 SAN FRANSISCO RESTAURANT PRICE* TRACK

DAY	CITY	RECEIVER	BUYS	SELLS	MARK-UP
			(Prices in Canadian $)		
Tuesday	Vancouver	First Receivers (24) Trucking $0.15/lb	$2.80	$3.00	7%
Thursday	San Fransisco	Broker Trucking $0.10/lb	$3.15	$3.40	7%
Thursday	San Fransisco	Wholesaler	$3.40	$4.10	20%
Friday	San Fransisco	Restaurant	$4.10	$14.95	

* The Restaurant Selling Price is determined as follows:

Buying Cost	$4.10
Yield (Filleting & Trimming)	60%
Net Cost	$6.83
Net Cost/Unit	$3.42 (8 oz portion)
Garnishes	$1.00
Subtotal	$4.42
Labour/Overhead	$10.53
TOTAL PRICE	$14.95
Food Cost Percentage	30%

4.5.3 Evaluation

Price tracking was found to be an extremely useful exercise in that it better defines the distribution channels farmed salmon passes through and the mark-ups at each level. While retail price tracks were relatively easy to establish, the restaurant section in the target cities were more difficult to track because of difficulty in obtaining accurate price information from them. This could be more easily achieved by personal interviews with chefs and the wholesalers who supply them. This methodology would be beneficial to conduct on a monthly to bi-monthly basis to gauge any emerging changes in distribution strategies and changes in mark-ups.

4.6 A.C. Nielsen Company In-Store Observations

4.6.1 Background

A.C. Nielsen Company is one of the largest market research companies in North America. The company specializes in consumer based research at the retail level. They offer a variety of services, including in-store observations to obtain price and shelf space data for a wide variety of fresh, frozen and packaged food products as well as health and beauty aids. A.C. Nielsen also has access to computerized scan data from the stores that they survey which can be used to track product sales volumes.

The vast majority of A.C. Nielsen's clients are in the packaged goods sector. However, the company has in the past monitored prices for a variety of fresh food products such as poultry, red meat, dairy products and also fresh fruit and produce. Very limited fresh fish prices have been monitored by A.C. Nielsen in the past. Tracking fresh salmon prices therefore represented the first time A.C. Neilson has performed such a service.

4.6.2 Methodology

The two cities that were selected to conduct Nielsen in-store inspections for fresh salmon products and their corresponding prices were Toronto and Seattle. These two cities were chosen on the basis that the current distribution systems to the retail sectors in both these cities are well established. Several of the largest retail chains are now buying direct from B.C. first receivers. The product is shipped directly to the retailers' large distribution warehouses were it is broken down into smaller shipments and then transported to the individual retail outlets.

Exhibit 4.15 summarizes the number of stores surveyed in each city, the names of the retail chains included in the survey, and the time-frame involved. A total of 15 stores were surveyed in Toronto the week of June 25th and 56 stores were surveyed in Seattle the week of July 2nd.

Exhibit 4.16 shows the standard price form that the B.C. Salmon Farmers Association provided A.C. Nielsen personnel to survey product availability and prices at each store included in the survey. Salmon which is sold at the retail level is typically identified by its place of origin. This was therefore the first distinguishing characteristic to be identified by the survey personnel. The species of the salmon was the next characteristic that was to be positively identified, either on the product or in a banner above the product. The third distinguishing characteristic to be identified, if displayed or labelled was, whether the product was farmed or wild. If it was not, it was classified as "Unidentified". The final item to be identified was the product form which, was whole, steak, or fillet.

The advertised price was then recorded for the appropriate combination of characteristics of each product in the fresh seafood section of the retail store. Price data was collected not only for Canadian salmon products, but also for other competitive salmon products from other regions as well as other species of seafood such as sole, halibut, catfish and trout.

EXHIBIT 4.15 RETAIL STORES SURVEYED BY A.C. NIELSEN COMPANY

CITY	SURVEY DATE	NUMBER OF STORES SURVEYED	RETAIL CHAINS SURVEYED
Toronto	June 25-29, 1990	15	Miracle Food Mart A&P/New Dominion Loblaws
Seattle	July 2 - 6, 1990	58	Safeway Albertson's Quality Food Center Keith Uddenburg Fred Meyer's Thrifty Foods Olson's Johnny's Food Ctr Associated Grocers West Coast Grocery Flemming Grocery Supervalue

EXHIBIT 4.16 IDENTIFICATION OF FRESH SALMON IN RETAIL OUTLETS

PLACE OF ORIGIN	SALMON SPECIES	FARMED VS WILD	PRODUCT FORM	PRICE $/POUND
1) Canadian: British Columbia	Chinook/King/ Spring	Farmed Wild Unidentified	Whole Steak Fillet	
2) Canadian: British Columbia	Coho/Silver Spring	Farmed Wild Unidentified	Whole Steak Fillet	
3) Canadian: British Columbia New Brunswick	Atlantic	Farmed Wild Unidentified	Whole Steak Fillet	
4) Norwegian	Atlantic	Farmed Wild Unidentified	Whole Steak Fillet	
5) Chilean	Atlantic	Farmed Wild Unidentified	Whole Steak Fillet	
6) Scottish	Atlantic	Farmed Wild Unidentified	Whole Steak Fillet	
7) US: California Oregon Washington	Chinook/King Spring	Farmed Wild Unidentified	Whole Steak Fillet	
8) Alaskan Troll	Chum	Wild	Whole Steak Fillet	
9) Alaskan	Pink	Wild	Whole Steak Fillet	
10) Alaskan	Chinook/King/ Spring	Farmed Wild Unidentified	Whole Steak Fillet	
11) Alaskan	Sockeye	Wild	Whole Steak Fillet	
12) Alaskan	Coho/Silver	Wild	Whole Steak Fillet	

(continued...)

EXHIBIT 4.16 (Continued) IDENTIFICATION OF FRESH SALMON IN RETAIL OUTLETS

PLACE OF ORIGIN	SALMON SPECIES	FARMED VS WILD	PRODUCT FORM	PRICE $/POUND
13) Unidentified Origin	Salmon	Farmed Wild	Whole Steak Fillet	
14) Other Seafood	Sole		Whole Steak Fillet	
	Halibut		Whole Steak Fillet	
	Pollock		Whole Steak Fillet	
	Catfish	Farmed Wild Unidentified	Whole Steak Fillet	
	Trout	Farmed Wild Unidentified	Whole Steak Fillet	
	Cod		Whole Steak Fillet	

4.6.3 Results

A.C. Nielsen typically provides its' clients with a detailed report summarizing the overall results of the survey on a city wide basis. They also provide results by retail chain and, depending on the size of the city, by retail store individually.

The results format for Toronto and Seattle given by A.C. Nielsen were not exactly the same even though they were provided with the same form and specifications for the final format of the data. The Toronto Nielsen study provided price data for each individual species if it was farmed, wild or unidentified. The Seattle study unfortunately averaged the price of each of these categories for the chinook and coho sections of the survey. However, the Seattle study provided a valuable percentage breakdown of in what product form (i.e. whole, steak or fillet) the salmon was sold.

Toronto

The results from Toronto showed that 20% of the stores surveyed displayed salmon that was identified as being "Canadian/B.C. farmed chinook salmon". Another 27% of the stores displayed product identified as being "Canadian/B.C. chinook salmon" that was not identified as being farmed or wild. However, since the B.C. troll fishery did not get under way until July 1st it is very likely that the vast majority of this salmon was farmed product. Therefore, 47% of the stores displayed salmon that was B.C. farmed chinook.

The average regular price for a whole, head-on product was $7.99/lb. for farmed and $8.99/lb. for unidentified. The special price for farmed was advertised as being $4.99/lb. Steaks were regularly priced at $7.99/lb and as specials at $6.99/lb. Fillets were advertised specials at $7.05/lb.

Salmon that was identified as Canadian/B.C. farmed coho was found in only one of the 15 stores surveyed. Only fillets were observed and they were listed as being a regular price of $7.99/lb. Wild coho was also available in 7% of the stores and was listed as being $5.45/lb. for the whole, head-on product and $5.33/lb. for the steaks and fillets. There were a total of 46% of the stores surveyed that contained unidentified Canadian/B.C. coho salmon. Since there were only limited volumes of wild coho available duringthis period, it is likely that most of this salmon was farmed. The average price for a whole, head-on coho was $7.28/lb. and $7.99/lb. for steaks.

"Canadian/B.C./New Brunswick Atlantics" were also available in the Toronto retail stores surveyed. There were 13% of the stores that had them identified as being farmed and 13% as unidentified. Steaks were available for between $8.99-$10.63/lb. There were no other imported farmed Atlantic salmon products available.

There was an abundance of other seafood available in the retail stores surveyed in Toronto. Both sole and cod were available in 73% of the stores and halibut and trout were available in 47%. Prices varied widely for other seafood products. Cod fillets were the lowest at $5.15/lb., while catfish fillets were the highest at $12.40/lb. Halibut steaks ranged in price between $6.29-$6.99/lb. Sole fillets ranged $6.21-$8.03/lb.B.C. farmed chinook salmon steaks and fillets, priced at between $6.99 - $7.99/lb were therefore competitively priced, but slightly more than most of the halibut steaks and within the sole fillet price range.

Seattle

The Nielsen survey for Seattle reported their data in a slightly different format than Toronto. They provided a percentage breakdown by product type (i.e. whole, steak or fillet) of its presence in the retail stores surveyed. For prices, they reported only an averaged price for farmed, wild and unidentified.

Farmed Canadian/B.C. salmon was found in a number of stores in Seattle in a variety of product forms. "Canadian/B.C. chinook salmon" was found in 15% of the stores as a whole product, 8.4% as a steak and 8.4% as a filleted product. "Canadian/B.C. coho salmon" was found in 2.9% of the stores as a whole product, and similarly 2.9% of the stores carried steaks and also fillets.

Average prices for whole farmed chinook were $4.38/U.S./lb., $5.26/U.S./lb. for steaks, and $5.89/U.S./lb. for fillets. Coho salmon was less expensive being $3.51/U.S./lb. for whole, $3.99/U.S./lb. for steaks and $4.98/U.S./lb. for fillets. There were no Canadian Atlantic salmon advertised in the Seattle stores surveyed, but there were Chilean and Scottish Atlantic fillets available in 2.6% of the stores surveyed, pricing at between $4.98-$7.98/U.S./lb.

The California to Washington chinook troll fishery had already been opened a few weeks prior to the study Nielsen study in Seattle and there was between 1.6% - 5.4% of the stores carrying this product. Prices for troll caught chinook were generally equivalent to the Canadian farmed product (i.e. within $0.10 - $0.20/U.S./lb.)

There was a predominance of Alaskan salmon available in the retail stores in Seattle during the week of this study. Inexpensive Alaskan chum salmon was available for the July 4th weekend in significant quantities. Average whole chum prices were $3.98/lb. Nearly 20% of the stores displayed Alaskan chum salmon. Troll caught Alaskan chinook were also available with whole, head-on product available in 9.5% of the stores, steaks in 26.5% and fillets in 36%. Prices for Alaskan troll chinook were similar to those of the B.C. farmed product, with Alaskan chinook steaks and fillets going for 7% and 17% more than the Canadian farmed chinook salmon products.

A variety of other seafood products were also available in the Seattle survey. Similar to Toronto, both sole and cod fillets were in the highest percentage of stores at 75% and 81% respectively. Whole trout were found in 44% of the stores and was an average $3.18/U.S./lb. Halibut steaks were the next most predominant seafood product at 41% and averaged $5.22/U.S./lb. B.C. farmed salmon steaks, at $5.26/lb. on average, were price competitive with the halibut steaks.

4.6.4 Evaluation

This study has shown that A.C. Nielsen Company Ltd. can be used as an effective tool in determining the presence, identity label, product form, and price of Canadian farmed salmon products and its competitors. This was the first detailed fresh salmon study that A.C. Nielsen Company has performed either in Canada or the U.S. Future surveys would ensure that a consistent final data format would be obtained from all cities studied.

Further Nielsen studies conducted should also have included along with the survey form an additional sheet clearly showing the visual differences between a steak and a fillet. It was clear from the results that in some instances the surveyors were not entirely certain of what a steak and fillet actually were. For example, halibut is shown in the Seattle study as being identified as both a steak and a fillet. However, halibut is only typically sold in a steak form. The retail outlet itself may have mislabelled the product as well.

The survey also shows the diversity of salmon products available during the summer period, particularly in Seattle, and of the degree of competition salmon faces in the fresh seafood counters with other fresh seafood products.

EXHIBIT 4.17 TORONTO IN-STORE INSPECTION SUMMARY OF 15 RETAIL STORES WEEK OF JUNE 25, 1990

Fish Catetory	Store Dist	% of Stores	WHOLE Reg Price	WHOLE Spec Price	STEAK Reg Price	STEAK Spec Price	FILLET Reg Price	FILLET Spec Price
Presence of Fresh seafood	15	100						
Presence of Fresh Seafood	15	100						
Presence of All Other Fresh Seafood	14	93						
Canadian/B.C.: Chinook/King/Spring								
Farmed	3	20	$7.99	$4.99	$7.99	$6.99		$7.05
Wild								
Unidentified	4	27	$8.99			$5.99	$6.60	
TOTAL	7	47						
Canadian/B.C.: Coho/Silver								
Farmed	1	7					$7.99	
Wild	1	7	$5.45			$5.33		$5.33
Unidentified	7	46	$7.28		$7.99	$6.65	$7.03	
TOTAL	9	60						
Canadian/B.C./N.B.:Atlantic								
Farmed	2	13					$10.63	
Wild								
Unidentified	2	13					$ 8.99	$8.99
TOTAL	4	26						
Norwegian Atlantic								
Chilean Atlantic								
Scottish Atlantic								
California/Oregon/Washington								
Alaskan								
Troll Chum								
Pink								
Chinook/King/Spring								
Sockeye								
Coho/Silver								
Unidentified Origin	4	27	$4.49			$4.49		$6.72
Other Seafood:								
Sole	11	73						$8.03 $6.21
Halibut	7	47				$6.99	$6.29	$5.56
Pollock								
Catfish	3	20						$12.40 $8.53
Trout	7	47	$5.53	$6.12				$6.97
Cod	11	73						$5.15

EXHIBIT 4.18 SEATTLE IN-STORE INSPECTION SUMMARY OF 58 RETAIL STORE PRICES
WEEK OF JULY 2, 1990

	WHOLE		STEAK		FILLET	
	% of Stores	Average Price	% of Stores	Average Price	% of Stores	Average Price
Canadian/B.C. Chinook/King/Spring						
Farmed	15.0	$4.38	8.4	$5.26	8.4	$5.89
Wild					5.4	
Unidentified	3.2				1.0	
Canadian/B.C. Coho/Silver						
Farmed	2.9	$3.51	2.9	$3.99	2.9	$4.98
Wild						
Unidentified	5.6					
Canadian/B.C./N.B.Atlantic						
Norwegian Atlantic						
Chilean Atlantic	2.9	$7.98				
Scottish Atlantic	2.6	$4.98				
California/Wash. Chinook/King/Spring						
Farmed						
Wild	1.6	$4.12	3.0	$5.22	3.6	$5.95
Unidentified	5.6		1.8		5.4	
Alaskan:						
Chum	19.8	$3.12	27.1	$3.45	34.5	$4.19
Pink	2.0	$3.98	4.3	$4.31	2.5	$4.72
Chinook/King/Spring	9.5	$4.10	26.5	$4.59	36.0	$6.89
Sockeye	2.0	$3.99	3.6	$4.48	2.1	$5.99
Coho	3.3	$2.99	1.7	$3.88		
Unidentified Geographic Origin (All salmon Species)	5.9	$3.7	1.8	$3.80	13.9	$4.04
Other Seafood:						
Sole					74.5	$4.41
Halibut			40.8	$5.22	13.4	$6.57
Pollock					15.1	$3.20
Catfish	15.1	$4.29			22.3	$4.93
Trout	44.0	$3.18	1.8	$3.28	4.3	$4.66
Cod			6.7	$3.02	80.8	$4.01

4.7 Retail and Telephone Price Survey

4.7.1 Methodology

This component of the study involved direct telephone calls to the seafood counters of major retail outlets and to speciality fish stores to obtain fresh salmon price information on a weekly basis. The major retail chains in each city were previously identified by the BCSFA through their existing contact list. The locations and telephone numbers of individual store outlets were obtained by contacting the retail chain directly. Wherever possible, further information on the retail chains' purchasing procedures was also obtained.

Exhibit 4.19 details the number of stores surveyed on a weekly basis in each city and the names of the individual stores. Discussions with retail head offices revealed that the pricing of all items within a chain for a particular city would be exactly the same from store to store. This meant that only one store from a large chain in a target city would have to be contacted to gather price information for the entire chain. Speciality seafood stores were also included in Vancouver, Los Angeles and San Francisco in order to ascertain if any significant price discrepancies existed between speciality seafood stores and retail stores.

A total of 28 stores were included in the weekly price survey; 20 retail outlets and 8 speciality seafood stores. The time frame for the retail telephone price survey was from June 22 - September 31, 1990 for Vancouver and Toronto and from July 9 - September 31, 1990 for remaining cities.

It was found that many of the retail store employees were not aware in most cases if the salmon they were selling was farmed or wild-caught. The vast majority of the employees, particularly in the U.S. stores, thought that the chinook salmon they sold was wild. Differentiation between farmed and wild salmon prices was therefore difficult to perform because of the lack of knowledge of employees about the product and the availability of wild salmon during the study period. Farmed chinook and coho prices were found so intermittently that they were integrated into the wild prices to establish continuity for price graphs.

EXHIBIT 4.19 RETAIL AND SPECIALITY FISH STORES SURVEYED IN TARGET CITIES

CITY	NUMBER OF STORES	STORE
Vancouver	6	The Salmon Shop Safeway IGA Seven Seas Seafoods Dunbar Seafoods Kerrisdale Seafoods
Toronto	4	Dominion Stores A&P Markets Miracle Food Mart Loblaws
Seattle	5	Albertson's Quality Food Center Safeway Thriftway Market Olson's
Los Angeles	5	Lucky Food Center Ralph's Grocery Von's Hugh's Markets Bob's Fresh Fish Market
San Fransisco	6	Lucky Food Center Safeway Thriftway Market Silver Salmon Company Halfmoon Bay Seafoods
Chicago	2	Jewel Food Stores Dominiques

A standardized method for comparing the relative mark-up of fresh salmon through the distribution system to the end user was developed and based on the first receiver prices obtained by the B.C. Salmon Farmers Association's Price and Volume Reporting System and the Urner Barry price reporting system. Both of these price reporting systems are based on a dressed, boxed, whole, head-on fresh salmon, FOB Vancouver and Seattle respectively.

The BCSFA Price and Volume reporting system prices were used for the Vancouver and Toronto calculations for steaks and fillets. The Urner Barry price reporting system was used for the calculation of first receiver salmon steak and fillet prices for the United States' target cities.

Since the most consistent data set gathered from all stores consisted of fresh salmon steak and fillet prices, the first receiver prices had to be converted in order to make a comparison possible. This was done by applying a standard conversion factor to the Urner Barry and BCSFA prices to obtain the "first receiver" selling price of salmon steaks and fillets. Fish processing companies and wholesalers were contacted to ensure the validity of the conversion factors used in this analysis. The recovery percentage for both steaks and fillets used was 60%. The recovery percentage for fillets can be higher but is usually applied to larger fish. The processing cost for fillets is considerably more than for steaks by a factor of 1.5 to 2.0. A conservative processing cost of 10 cents/pound was therefore used for steaks and 20 cents/pound for fillets. Exhibit 9.2 displays a sample calculation of a first receiver steak and fillet price.

It is stressed that most secondary processing is not done by first receivers. It is usually done by wholesalers/distributors or by the large retail companies themselves. The conversion factor of the first receiver price for Urner Barry and the BCSFA to a steak and fillet price therefore represents a "base selling price" for a steak or fillet if it were processed by a hypothetical first receiver who steaks and fillets the salmon themselves.

EXHIBIT 4.20 CALCULATION OF FIRST RECEIVER STEAK AND FILLET PRICES

First Receiver Price		
Farmed 4-6 lb. Chinook, Whole, Head-On		
BCSFA Price, June 24		$3.50
% Yield for Steaks and Fillets = 60%		$5.83
Processing Costs:		
Steaks	$0.10/lb.	$5.93
Fillets	$0.20/lb.	$6.03

4.7.2 Results

Results of this methodology are presented separately in Section 5.0.

4.7.3 Evaluation

Obtaining weekly price information by a telephone survey of retail stores in key target cities was determined to be an efficient means of monitoring consumer salmon prices. While it was difficult to obtain prices of other fresh seafood items in the store because of time constraints on busy employees, it was relatively easy for employees to provide the necessary price information for salmon.

This methodology was determined to be optimal for obtaining end-consumer price. This is the single most important price in terms of gauging what consumers actually pay for fresh salmon products in key target markets. Price tracking reveals what the relative mark-up of the retail stores actually are. Consumer price monitoring is critical to determine the final and largest mark-up of salmon before it is sold.

It was found that in many of the seafood counters surveyed, most of the employees had only a cursory knowledge of the salmon farming industry. They were often unable to say confidently if the salmon they were selling was farmed or wild. It was therefore difficult to distinguish between the farmed and wild chinook and coho salmon found in some instances.

Since this survey took place during the late June to September period, the vast majority of the salmon found in the retail stores during this period was wild salmon. Farmed chinook salmon was found in several Vancouver retail stores during July and August along with wild chinook and were priced exactly the same. Tracking farmed salmon prices using this method would be much more accurate during the off-season of the commercial salmon fishery. Any fresh salmon found would be certain to have been farmed, making the identification process much simpler.

4.8 Newspaper Advertisements

4.8.1 Methodology

Nearly all large retail stores utilize newspaper advertising as one of their promotional tools to convey price information to prospective end consumers. Retailers typically target Wednesday and Friday as the primary days in which to advertise in newspapers. Advertisements can sometimes be contained within the printed newspaper itself but more typically it is found in a multi-coloured, several paged pull-out from the newspaper itself. This form of advertising can be very expensive.

Retailers use advertised specials as "loss leaders" in which the retail chain reduces their mark-up on the advertised items in order to attract consumers to their stores and purchase the specials as well as other food products that are regularly priced. The reduced prices of advertised specials can also stimulate the consumer to purchase the product for the first time. This may lead some consumers to possibly buy the product at regular prices and on a more frequent basis. Advertised specials for salmon products are typically $1.00/lb. to $2.00.lb. lower than the regular price.

The collection of advertised newspaper specials of salmon products therefore provides a useful insight into the limited sale price of salmon products as well as the manner in which they are advertised. This includes size of the ad, as well as if the salmon is advertised as farmed or wild.

This component of the study therefore examined the feasibility of collecting fresh salmon price information from newspapers published in the six target cities. Wednesday and Friday editions of the papers were purchased and scrutinized for fresh salmon advertisements. Any advertisements found for fresh salmon were cut and collected.

4.8.2 Results

Inspection of newspaper advertisements for fresh salmon prices was very useful in providing information as to how retailers advertise fresh salmon products, particularly farmed salmon. Exhibit 4.21 to 4.24 show some sample newspaper advertisements gathered over the course of the study. They show that a variety of ad sizes are currently utilized to promote fresh salmon at the retail level.

The full page advertisement for Chicago promoting a "Taste of Canada" was part of a large retail promotion that was conducted by Canada West Trading Ltd. of Vancouver. This company specializes in promoting Canadian food products in the U.S. market and establishing new markets for Canadian products. However, most of the ads for fresh salmon were quite small (i.e. a 1/2" banner) in a relatively small fresh seafood promotion area within a larger pull-out section.

4.8.3 Evaluation

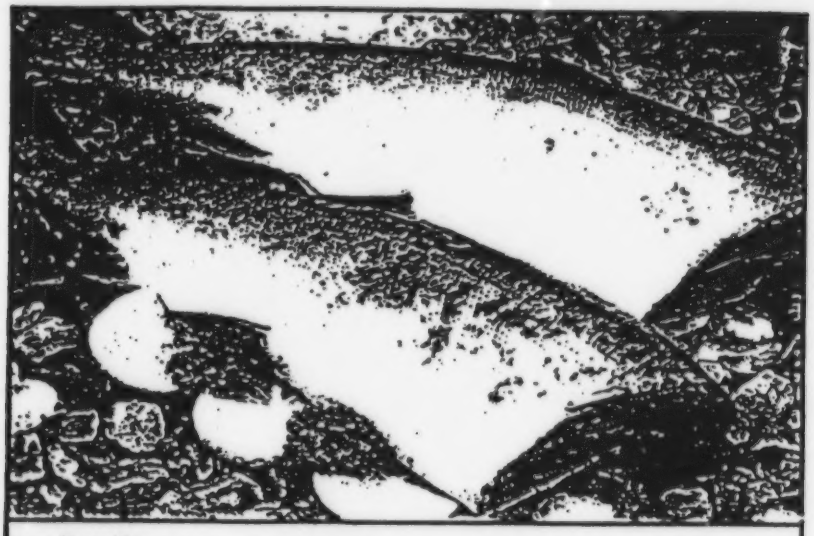
Price collection from newspaper advertisements was not as successful a technique compared to direct telephone surveys of retail store outlets. Fresh salmon prices were not reported on a weekly basis in any of the newspapers collected. Newspapers were found to be useful in identifying major retailers and fish speciality stores which could be subsequently called on a weekly basis to gather price information. They were also useful in showing if retailers advertise salmon being sold as farmed or wild.

4.9 Food Service Price Survey

4.9.1 Methodology

Price tracking was also conducted at the food service level. This was done by calling various seafood speciality restaurants and attempting to determine if they purchased B.C. farmed salmon, the price at which they bought it, and who supplied them with it. The wholesalers/distributors were then contacted and further interviewed regarding price and supply information. These restaurant names were obtained through existing BCSFA contacts as well as by research through the Yellow Pages of the various target cities for seafood restaurants.

EXHIBIT 4.21 FULL COLOUR PULL-OUTS THE VANCOUVER SUN

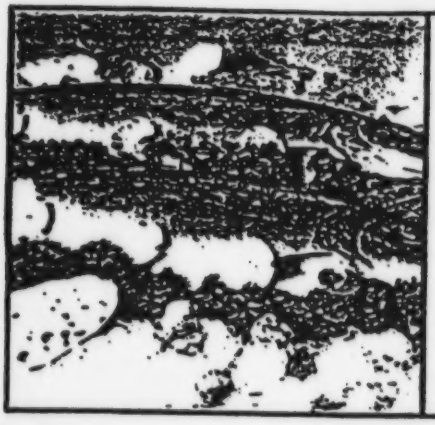


pink salmon

FROZEN

whole, head off or spring salmon head on

1.77 lb/454 g /100 g .39



COHO SALMON

Fresh. Wild. B.C. Salmon.
Average Size 2-4 lbs.

.77... 3.49 lb

Fresh Seafood

Fresh Sole Fillets

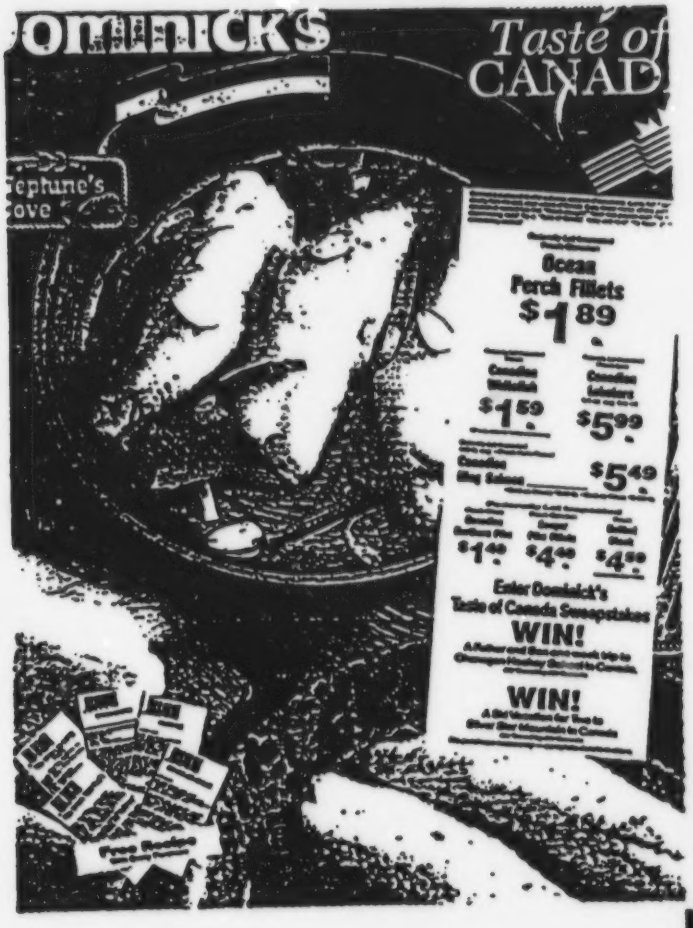
11.00 kg 4.99 LB

FRESH WHOLE Rainbow Trout

6.59 kg 2.99 LB

FRESH FARM RAISED Spring Salmon Fillets	10.79 kg	4.89 lb
FRESH Vegetable Tempura	11.99 kg	5.39 lb
Fresh Mussels IN THE SHELL	5.27 kg	2.39 lb
FROZEN SMOKED [illegible]	12.91	5.99

EXHIBIT 4.22 FULL COLOUR PULL-OUTS THE CHICAGO TRIBUNE



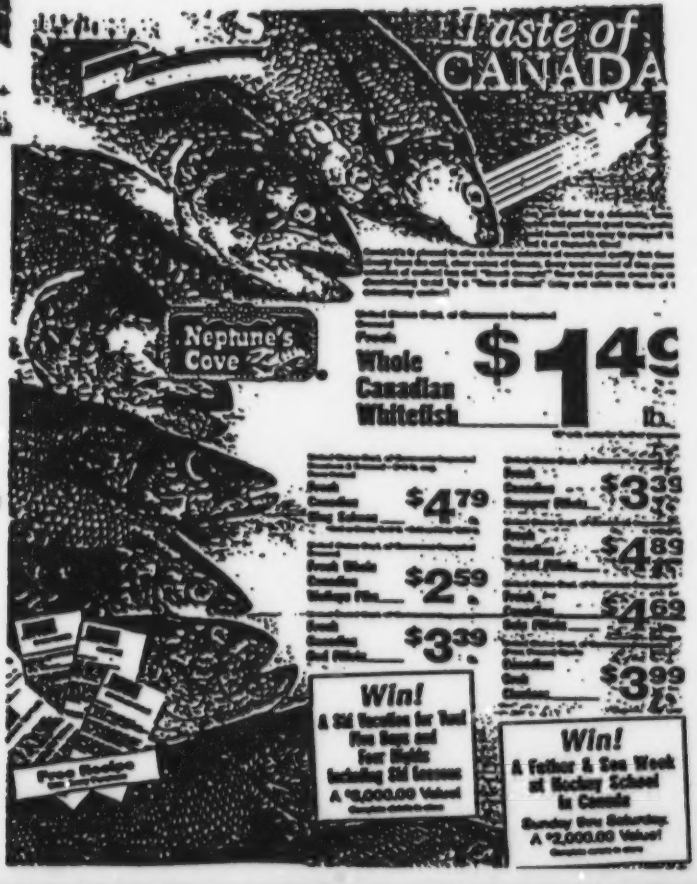
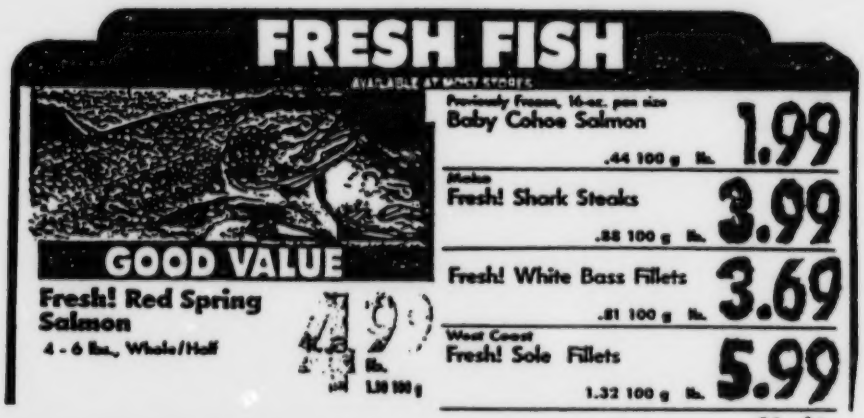


EXHIBIT 4.23 FULL COLOUR PULL-OUTS THE TORONTO STAR



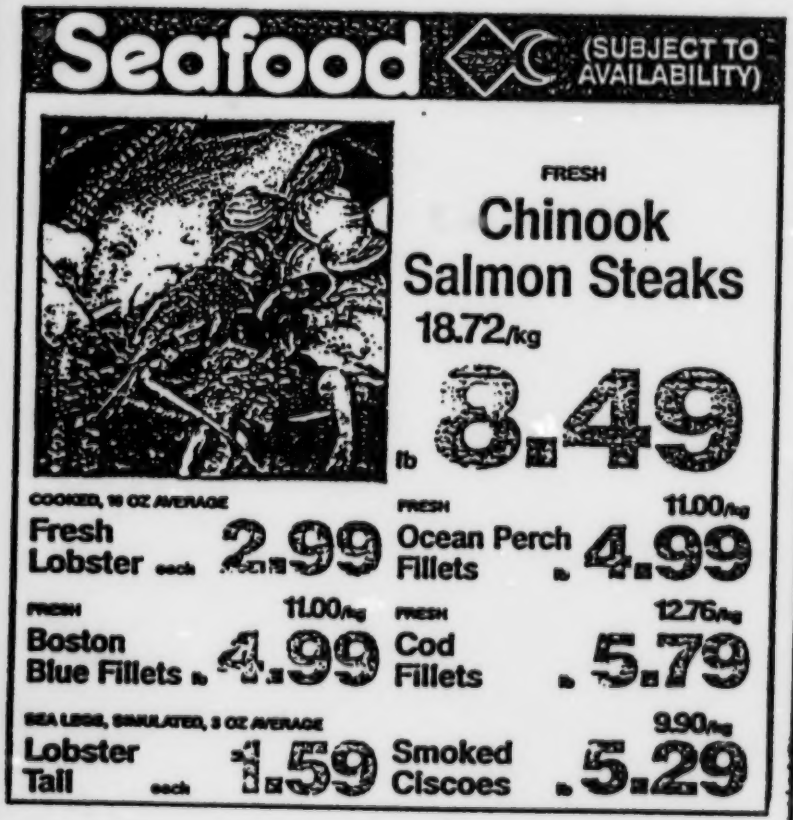


EXHIBIT 4.24 SEATTLE IN-STORE FLYER - 4 COLOUR ADS

FISHERMAN'S COVE

Fresh, "Seagroup," Farm Raised

KING SALMON FILLETS

5.89 Lb.

TILAPIA FILLETS

5.99 Lb.

Availability Subject To Weather Conditions.

available this week.

FRESH SEA GROUP

KING SALMON

WHOLE
2 TO 4-LB. AVERAGE

By working closely with Sea Group, we've able to supply our customers with fresh farm raised salmon that is the ultimate in quality. Your whole salmon may be stuffed and baked, or filled with overlapping slices of onion, lemon and parsley then brushed with oil, wrapped in foil and grilled over medium-hot coals. If you'd like your salmon filleted, please let us know; we'll be happy to do it - free of charge.

3.99 LB.

FRESH SEA GROUP KING SALMON FILLETS CUT FROM 2 TO 4-LB. KINGS

5.79 LB.

Another method tested to gather food service price data was to call wholesalers directly and enquire if they were purchasing B.C. farmed salmon and if so, what was their selling price of the product.

4.9.2 Results

Obtaining accurate price data from restaurants was found to very difficult for the following reasons:

1. Chefs, besides being responsible for the preparation of food in a restaurant, are also normally responsible for the ordering of all food for the restaurant's menu. They are always very busy and have only limited time to talk on the telephone. Because they are buying so many different products, chefs do not usually know the exact purchase prices of the salmon they buy.

2. The selling price of the salmon meals on a restaurant's menu could sometimes be obtained. However, the mark-ups of restaurants vary significantly, based on their individual overhead costs. It is therefore difficult to derive exactly what their purchase price of salmon actually was from the meal price.

3. It was found most restaurants have several wholesalerswho they can call on to supply them with various salmon and seafood products. The country of origin of specific salmon products therefore changes from week to week and from month to month, depending on who their wholesaler is at the time.

Useful qualitative information was gathered through conversations with Executive Chefs that we were able to talk to directly. For example, it was found that several chefs bought Norwegian or Chilean farmed salmon regularly but their preference was for no specific reason. They simply never considered or knew about Canadian farmed salmon.

Results of the wholesaler survey for obtaining price data was very poor. While most companies would divulge information on purchasing B.C. farmed salmon or other competitors products, there was strong reluctance on the part of all wholesalers and distributors to discuss prices of any kind. This is because of the fiercely competitive nature of the seafood distribution sector, where all sales are commission based and therefore extremely price sensitive.

4.9.3 Evaluation

Obtaining accurate price information from restaurants and wholesalers was found to be quite difficult for the reasons outlined above. A recommended strategy for obtaining better price information at the wholesaler and restaurant level would be to conduct personal interviews with them. It is much easier to discuss such information on a one-on-one basis than from a random telephone call. Other benefits of this approach would be gaining critical information on B.C. farmed salmon's perception in terms of quality, availability, and competitiveness with other farmed salmon from other countries. It would determine existing business in terms of product form is increasing sales in the HRI Trade.

5.0 TESTING OF OPTIMAL PRICE COLLECTION METHODOLOGY FOR A TWO MONTH PERIOD

Section 4.0 presented a review of all the price collection methodologies used in this study. As discussed in 4.7.2, the optimal price selection methodology was determined to be a weekly telephone survey of retail stores in key target markets to obtain the actual selling prices of fresh salmon at the consumer level. By knowing what the relative mark-up through the distribution system are from the Price Tracking exercise, the retailer's actual mark-up can be determined.

This section presents the results of this component of the study. Actual consumer prices are compared to known first receiver prices during the study period. By approximating percentage yields for steaks and fillets, the first receiver prices for steaks and fillets can be calculated and compared to the retail prices, as discussed in 4.7.1. The total mark-up by the distribution system from the first receiver to the consumer can then be calculated.

5.1 Vancouver

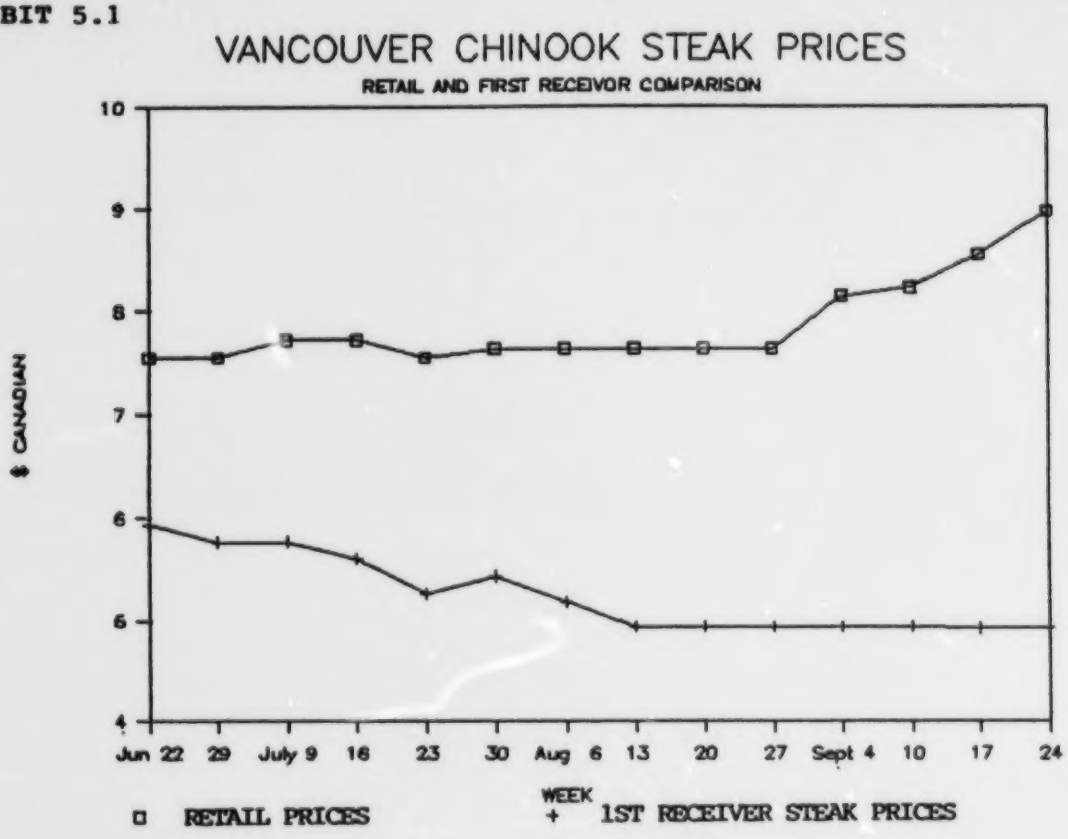
A total of six stores were surveyed in Vancouver over the June 22nd to September 31st period. Exhibits 5.1 and 5.2 display the averaged selling price for salmon steaks and fillets as well as the first receiver price for these products. Exhibit 5.1 shows how the average selling price for steaks was stable during the study period at about $7.50/lb. until the early September, when it rose to $8.50/lb. by the end of the month. During this time, however, the first receiver steak price dropped from nearly $6.00/lb. in late June to $5.00/lb. by mid-August.

Exhibit 5.2 similarly shows the same trend with fillet prices which were about $9.00/lb. over the summer and rising to about $10.00/lb. by the end of September. Exhibit 5.3 displays the total price mark-up from the first receiver to the end retail selling price of salmon over this period. It shows how the depressing effect of prices over the summer, coupled with the increasing of retail prices towards the latter part of the summer, led to a effective doubling of the mark-ups for both fillets and steaks. The Vancouver steak and fillet mark-ups in late June were 27% and 48%, respectively. By the end of September, these mark-ups were nearly 80% and 100% for steaks and fillets respectively.

5.2 Toronto

The four largest retail chains in the Toronto area were included in this price survey. The stores were Dominion, A&P, Miracle Food Mart, and Loblaws. Exhibits 5.4 and 5.5 display the averaged chinook steak and fillet prices over the study period. Chinook steak prices were just under $7.00/lb. in late June and stabilizedat about $7.50/lb. during July and August before increasing to about $8.20/lb. by the end of September. This is again contrasted to the declining Vancouver first receiver price for steaks from $6.00/lb. to $5.00/lb. Chinook fillet prices were $8.00/lb. in late June and oscillated during August and September between $9.00/lb. and $8.50/lb.

EXHIBIT 5.1


VANCOUVER CHINOOK STEAK PRICES
RETAIL AND FIRST RECEIVOR COMPARISON
$ CANADIAN
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Jun 22
29
July 9
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Aug 6
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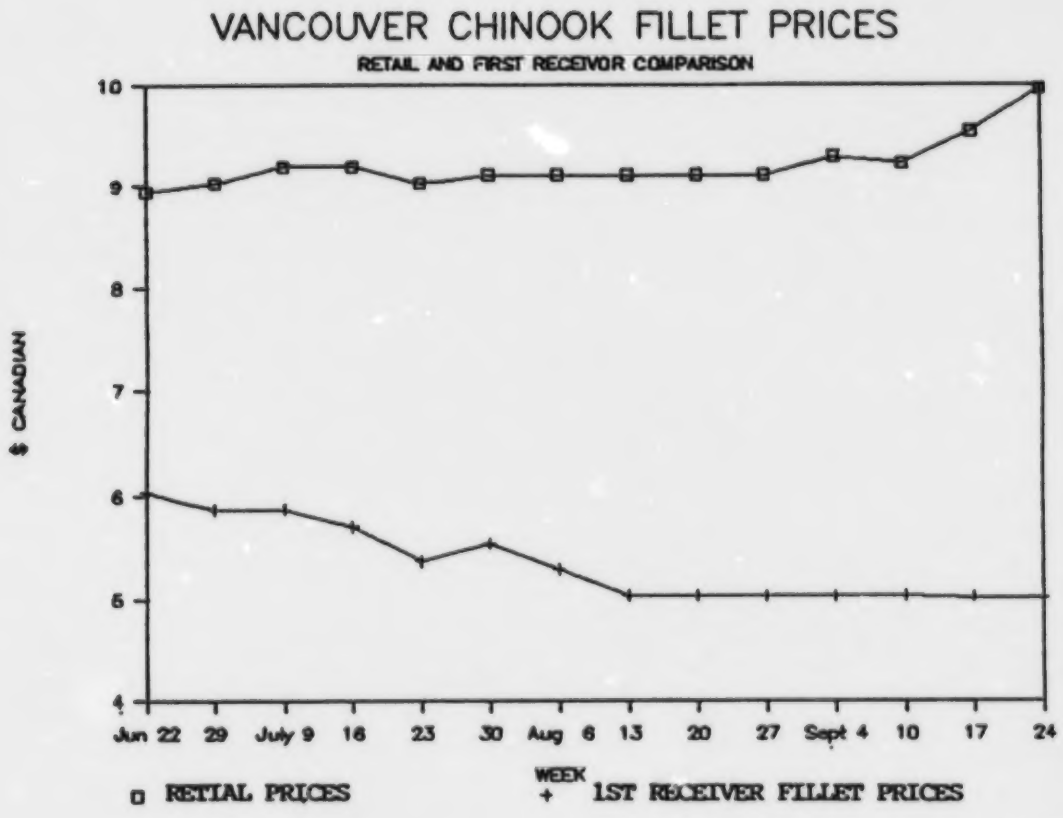
27
Sept 4
10
17
24
WEEK
RETAIL PRICES
1ST RECEIVER STEAK PRICES

EXHIBIT 5.2


VANCOUVER CHINOOK FILLET PRICES
RETAIL AND FIRST RECEIVOR COMPARISON
$ CANADIAN
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July 9
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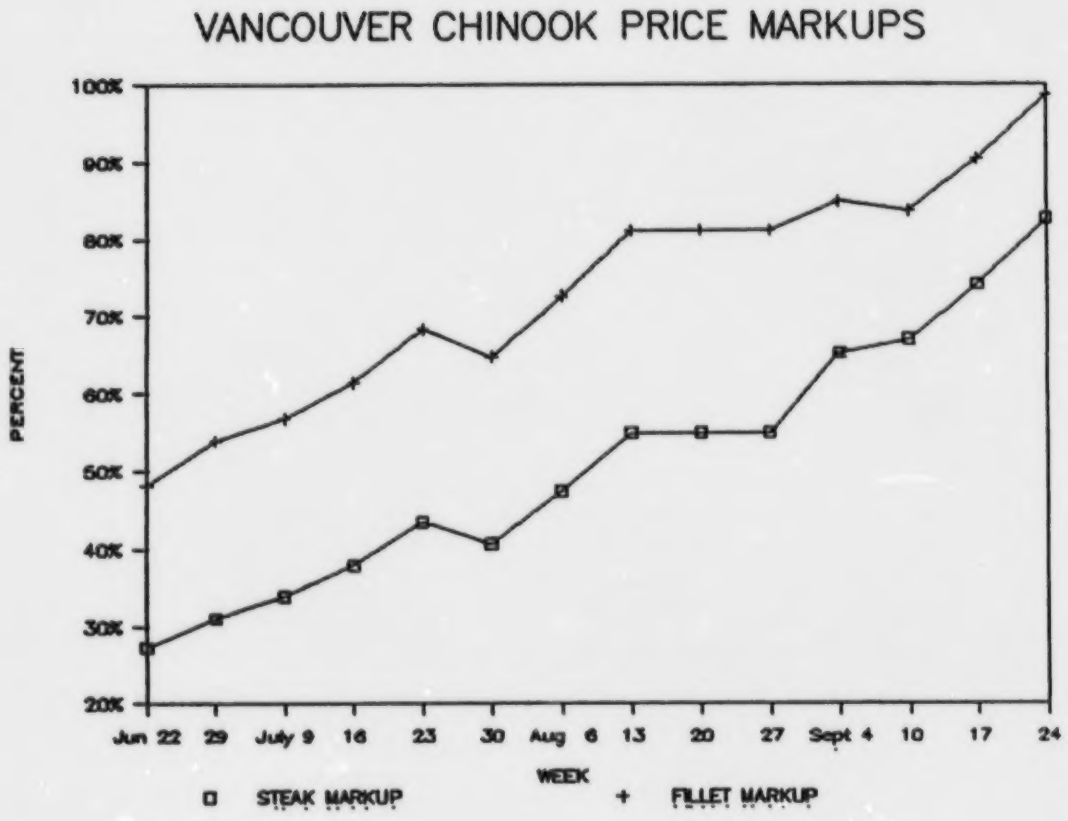
WEEK
RETIAL PRICES
1ST RECEIVER FILLET PRICES

EXHIBIT 5.3


VANCOUVER CHINOOK PRICE MARKUPS
100%
90%
80%
70%
60%
50%
40%
30%
20%
PERCENT
Jun 22
29
July 9
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Aug 6
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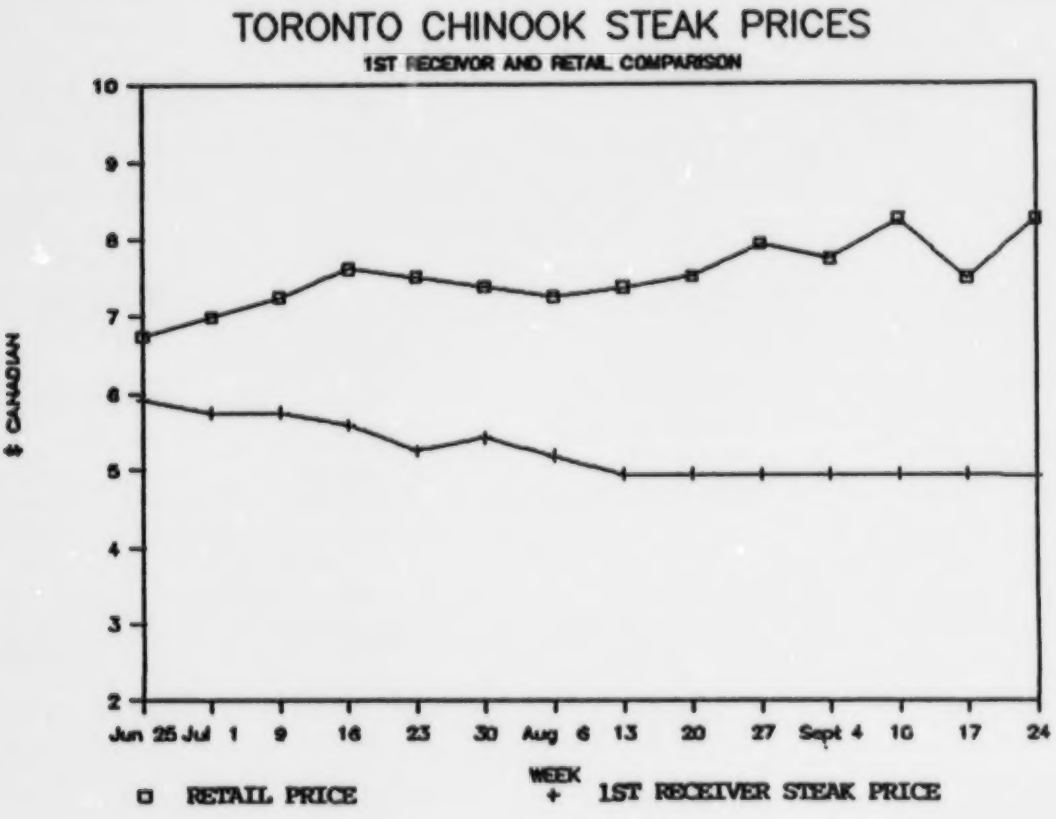
Sept 4
10
17
24
WEEK
STEAK MARKUP
FILLET MARKUP

EXHIBIT 5.4


TORONTO CHINOOK STEAK PRICES
1ST RECEIVOR AND RETAIL COMPARISON
$ CANADIAN
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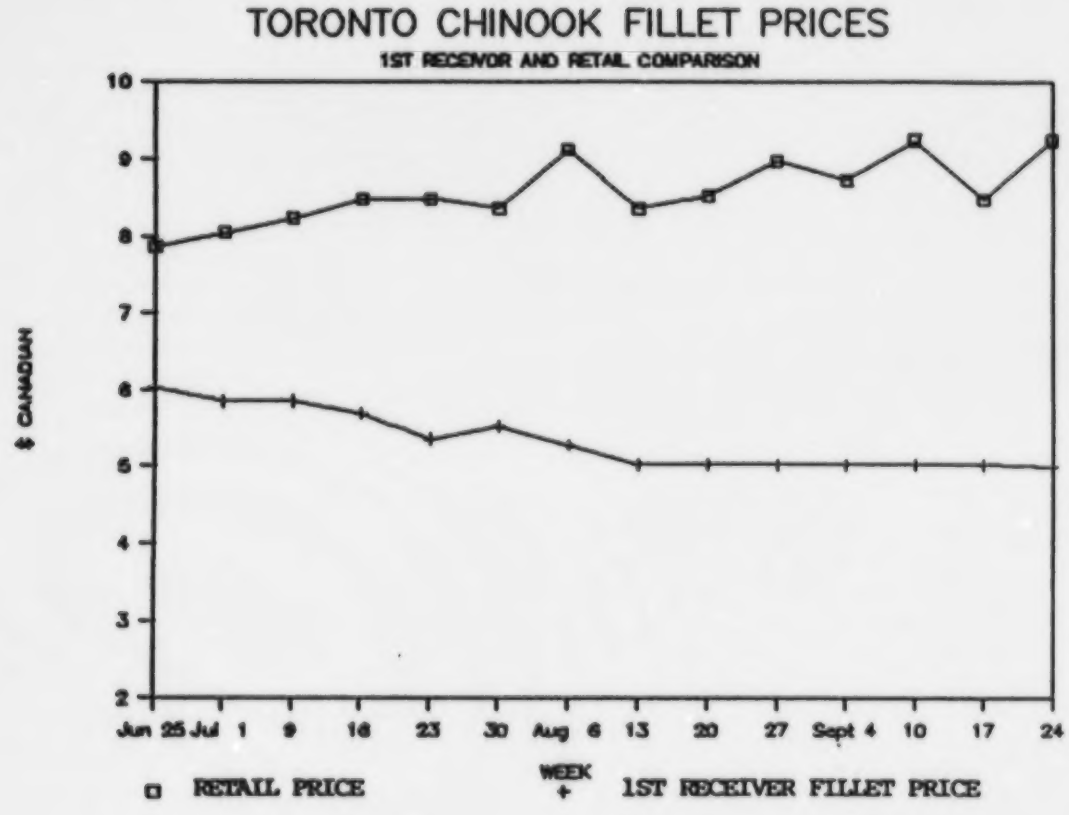
Jun 25 Jul 1 9 16 23 30 Aug 6 13 20 27 Sept 4 10 17 24
WEEK
RETAIL PRICE
1ST RECEIVER STEAK PRICE

EXHIBIT 5.5


TORONTO CHINOOK FILLET PRICES
1ST RECEIVOR AND RETAIL COMPARISON
$ CANADIAN
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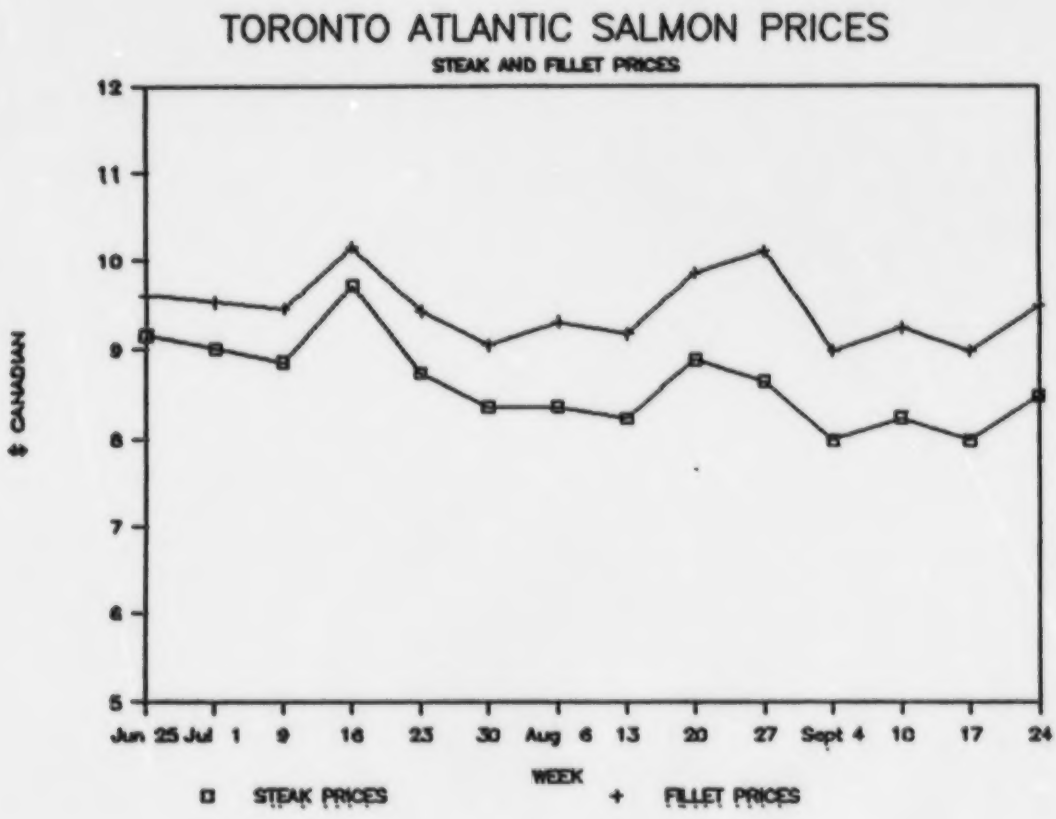
Jun 25 Jul 1 9 16 23 30 Aug 6 13 20 27 Sept 4 10 17 24
WEEK
RETAIL PRICE
1ST RECEIVER FILLET PRICE

EXHIBIT 5.6


TORONTO ATLANTIC SALMON PRICES
STEAK AND FILLET PRICES
$ CANADIAN
12
11
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9
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Jun 25
Jul 1
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Aug 6
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Sept 4
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17
24
WEEK
STEAK PRICES
FILLET PRICES

EXHIBIT 5.7

TORONTO RETAIL STEAK PRICES

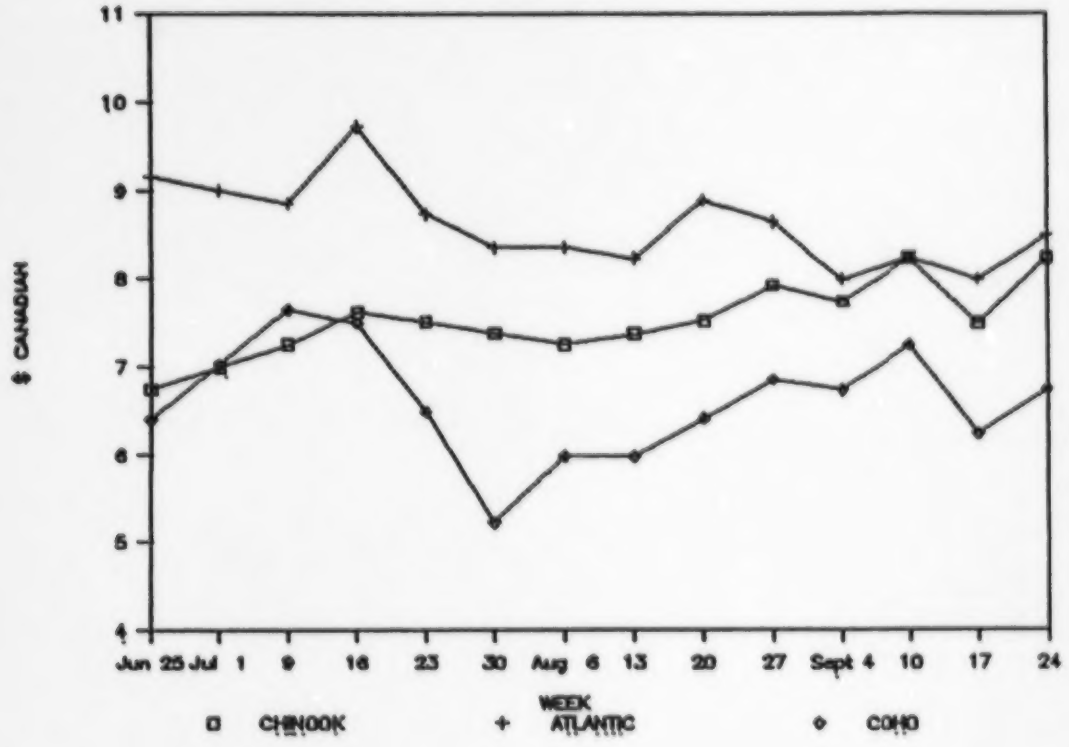
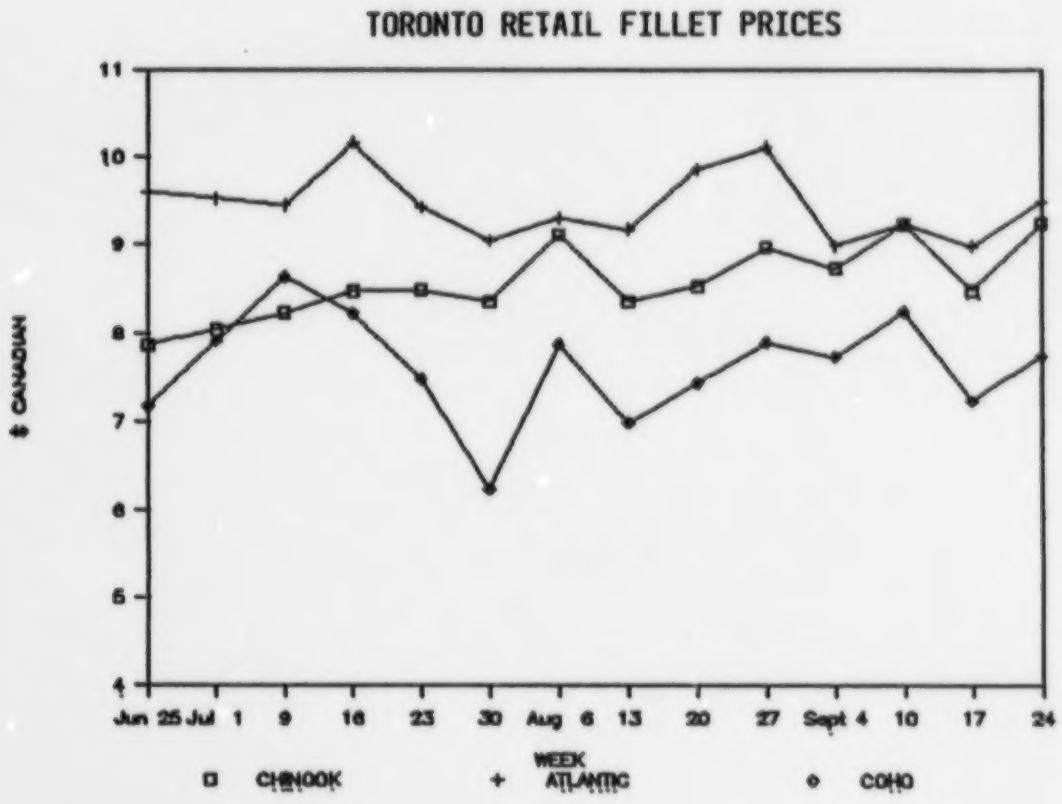


EXHIBIT 5.8


TORONTO RETAIL FILLET PRICES
$ CANADIAN
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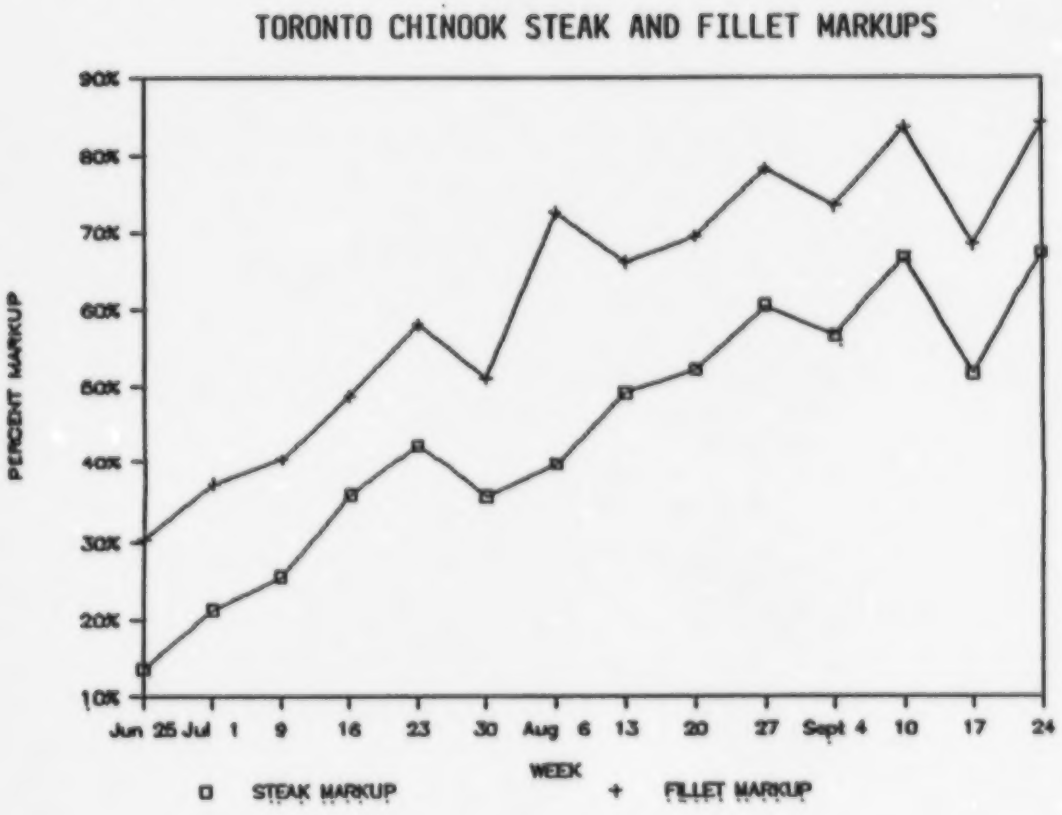
Jun 25 Jul 1 9 16 23 30 Aug 6 13 20 27 Sept 4 10 17 24
WEEK
CHINOOK
ATLANTIC
COHO

EXHIBIT 5.9


TORONTO CHINOOK STEAK AND FILLET MARKUPS
PERCENT MARKUP
90%
80%
70%
60%
50%
40%
30%
20%
10%
Jun 25
Jul 1
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Aug 6
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Sept 4
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WEEK
STEAK MARKUP
FILLET MARKUP

One Toronto store carried Atlantic salmon steaks and fillets over the course of the summer. Their prices are shown in Exhibit 5.6. Atlantic salmon fillet prices were generally between $9.00 - $9.50/lb. over the summer with the exception of increasing in late June and late August to just over $10.00/lb. Atlantic salmon steak prices were about $9.00/lb. in late June but decreased over the summer period to about $8.25/lb. by the end of September.

Toronto retail steak and fillet prices for Chinook, Atlantic and Coho salmon are compared in Exhibits 5.7 and 5.8. The overall trend was a gradual depression of Atlantic salmon steak prices towards the end of the summer to meet the gradual increasing of chinook salmon prices. Coho prices were similar to chinook prices until considerable volumes of wild coho became readily available and dropped the price more than $2.00/lb. below that of chinook. The price gap between chinook and coho steaks remained at about $1.00/lb. for the rest of the summer. A similar trend is seen in Exhibit 5.7 with fillet prices.

The Toronto chinook steak and fillet mark-ups over the study period are shown in Exhibit 5.9. This exhibit again highlights how the average price mark-up increases substantially over the course of the summer. Steak and fillet mark-ups were relatively low in the late June period, ranging between 15% for steaks and 30% for fillets. As the summer went on the mark-ups increased significantly, peaking in late September at 65% for steaks and nearly 85% for fillets.

5.3 Seattle

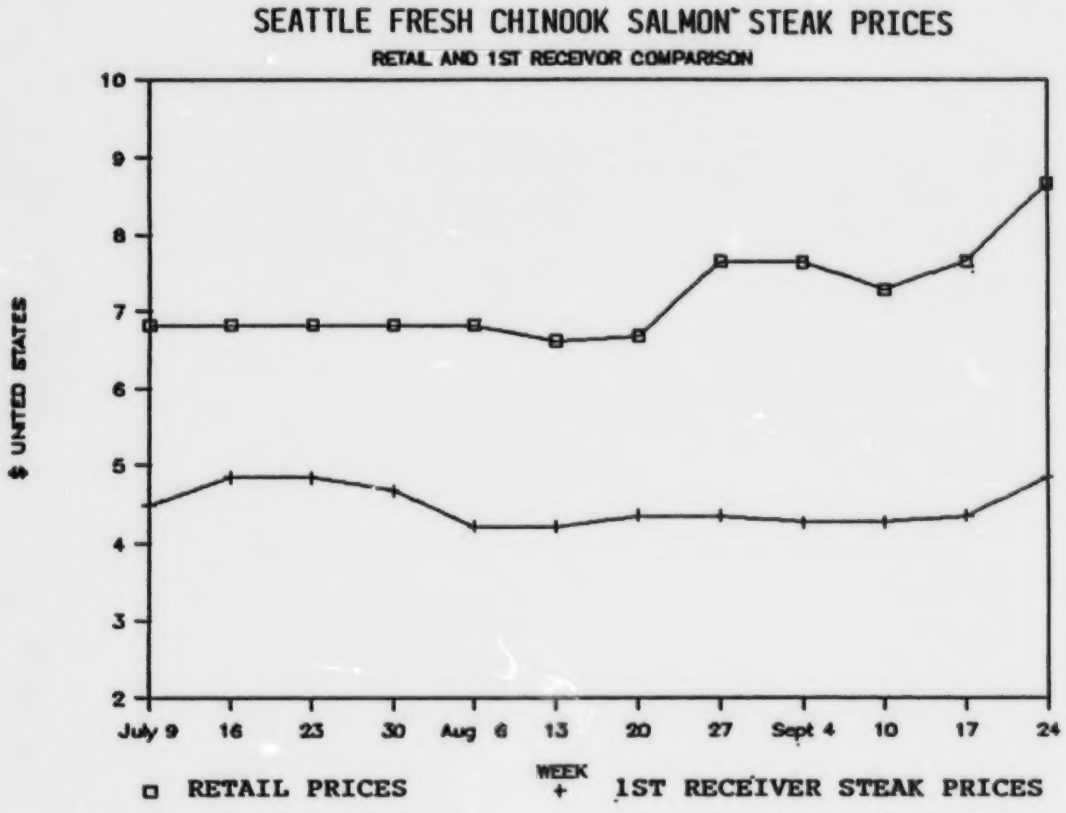
A total of 5 retail stores were surveyed in the Seattle area for this part of the study. The results are summarized in Exhibits 5.10 to 5.15. Chinook salmon steak and fillet prices are displayed in Exhibits 5.10 and 5.11. Retail chinook steak prices during the month of July were steady at $6.95/lb. and then increasing to over $8.00/lb. by the end of September. Similarly, chinook salmon fillets were about $7.50/lb. in early July and climbed to nearly $10.00/lb. by the end of September. This contrasts to the first receiver steak and fillet prices, derived from Urner Barry's prices, which were dropped in August to $4.25/lb. - $4.50/lb.

Exhibit 5.12 displays the total price mark-up for steaks and fillets from the first receiver to the retail selling price. The mark-ups during the month of July were 40% to 60% and increased over the summer period. Total mark-up were nearly 80% for steaks and 95% for fillets by the end of September.

Exhibits 5.13 and 5.14 show similar figures for Seattle retail coho salmon prices. Retail prices for this species were lower than for chinook, ranging between $5.00 to $6.00/lb. for most of the summer for steaks and fillets. Exhibit 5.15 shows that the mark-ups for coho salmon were generally lower overall when compared to chinook salmon. Mark-ups for coho were in the order of 20% to 50% for most of the summer.

Virtually all salmon reported in Seattle during this period was wild salmon, primarily from Alaska. There was no reported Atlantic salmon from Norway or Scotland found in the Seattle retail markets.

EXHIBIT 5.10


SEATTLE FRESH CHINOOK SALMON STEAK PRICES
RETAIL AND 1ST RECEIVOR COMPARISON
$ UNITED STATES
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Sept 4
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WEEK
RETAIL PRICES
1ST RECEIVER STEAK PRICES

EXHIBIT 5.11

SEATTLE FRESH CHINOOK SALMON FILLET PRICES

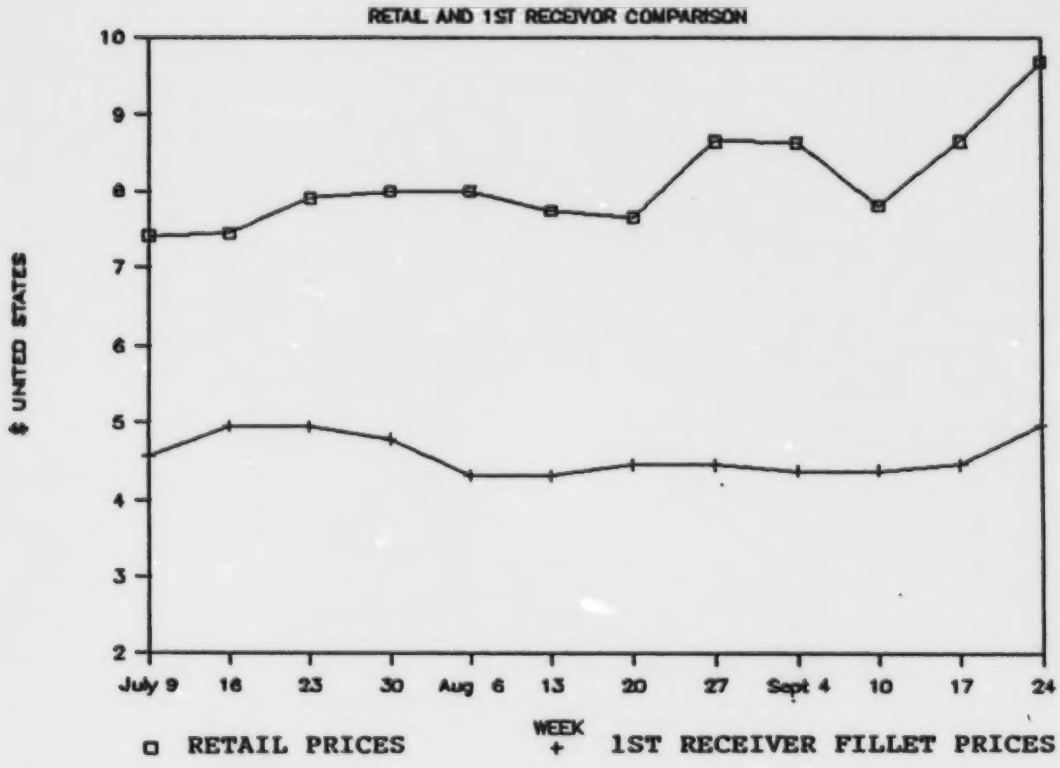
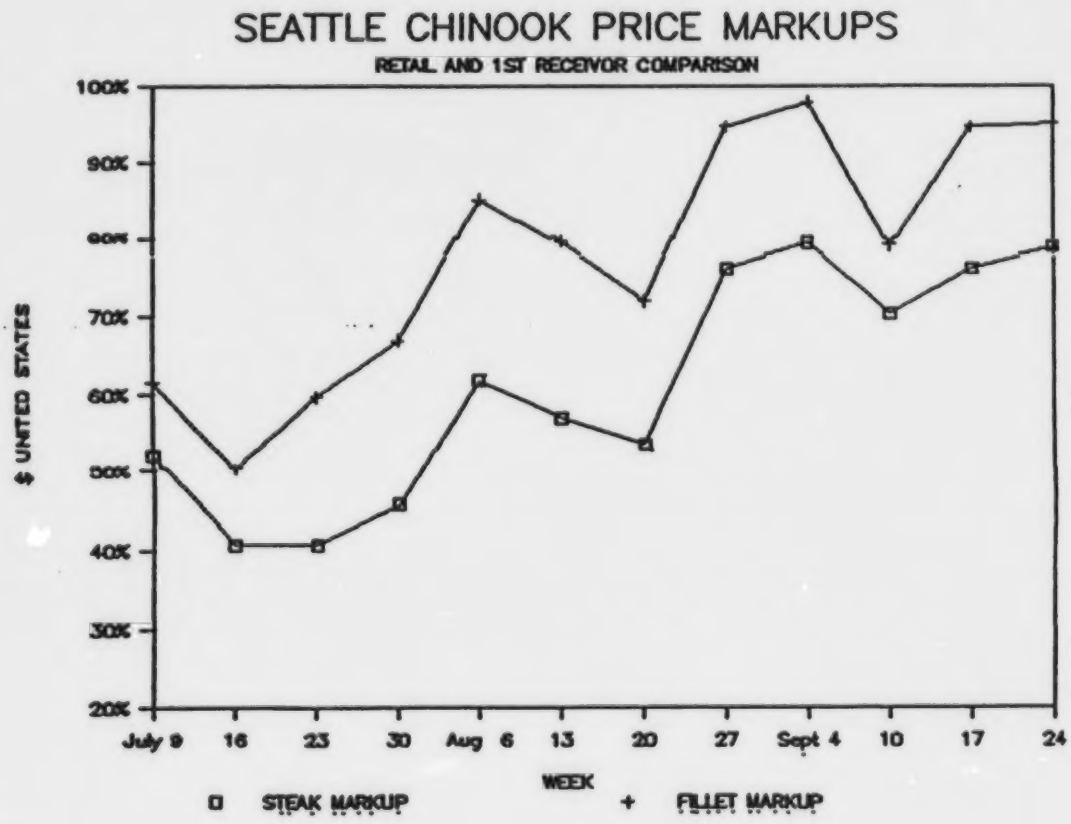


EXHIBIT 5.12


SEATTLE CHINOOK PRICE MARKUPS
RETAIL AND 1ST RECEIVOR COMPARISON
$ UNITED STATES
100%
90%
80%
70%
60%
50%
40%
30%
20%
July 9
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Aug 6
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Sept 4
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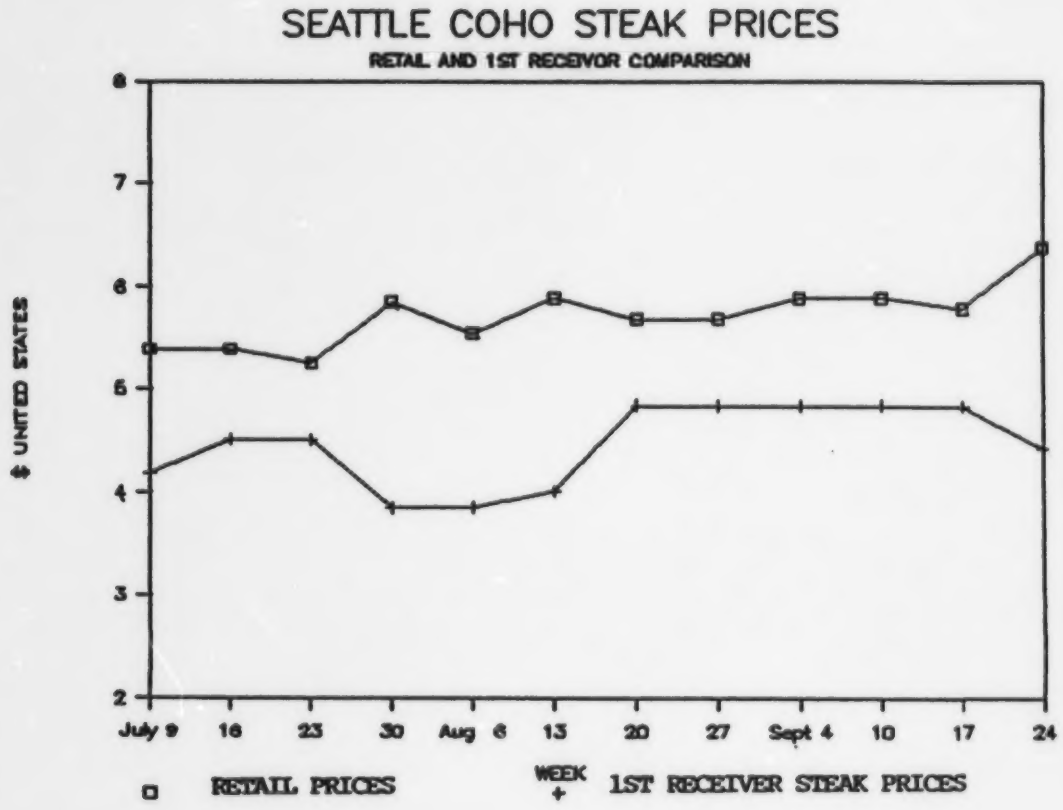
24
WEEK
STEAK MARKUP
FILLET MARKUP

EXHIBIT 5.13·


SEATTLE COHO STEAK PRICES
RETAIL AND 1ST RECEIVOR COMPARISON
$ UNITED STATES
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July 9
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Aug 6
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Sept 4
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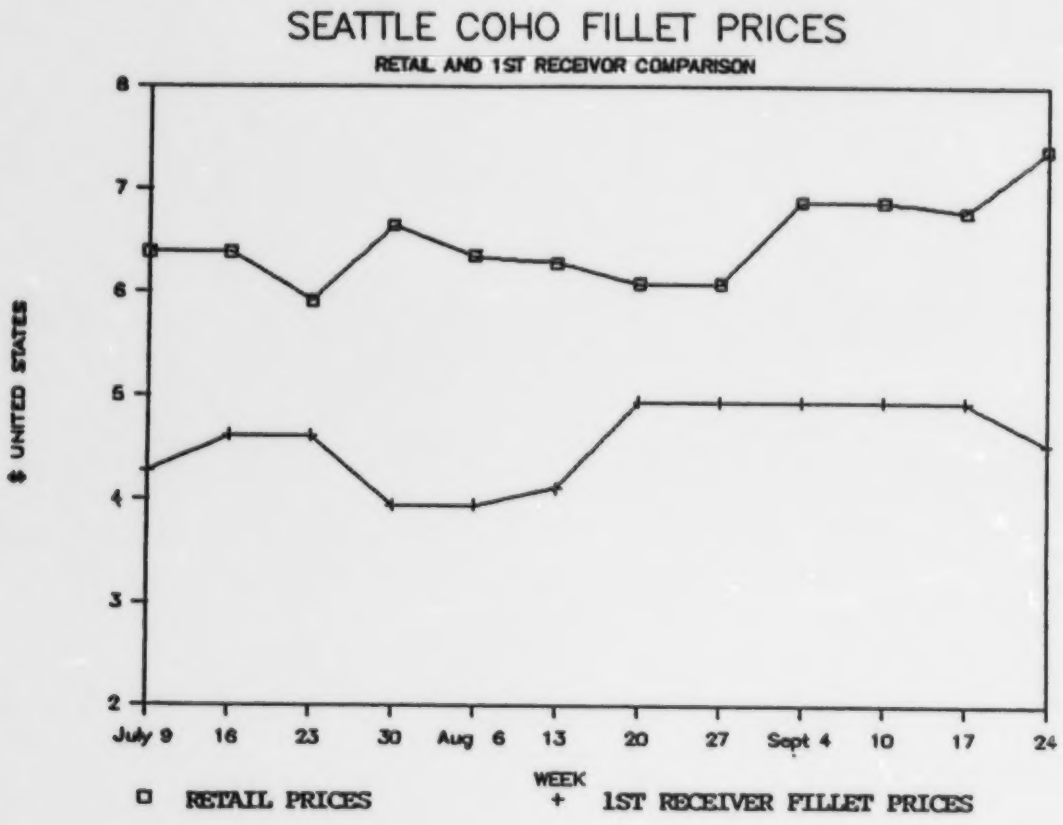
17
24
WEEK
RETAIL PRICES
1ST RECEIVER STEAK PRICES

EXHIBIT 5.14


SEATTLE COHO FILLET PRICES
RETAIL AND 1ST RECEIVOR COMPARISON
$ UNITED STATES
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July 9
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Aug 6
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Sept 4
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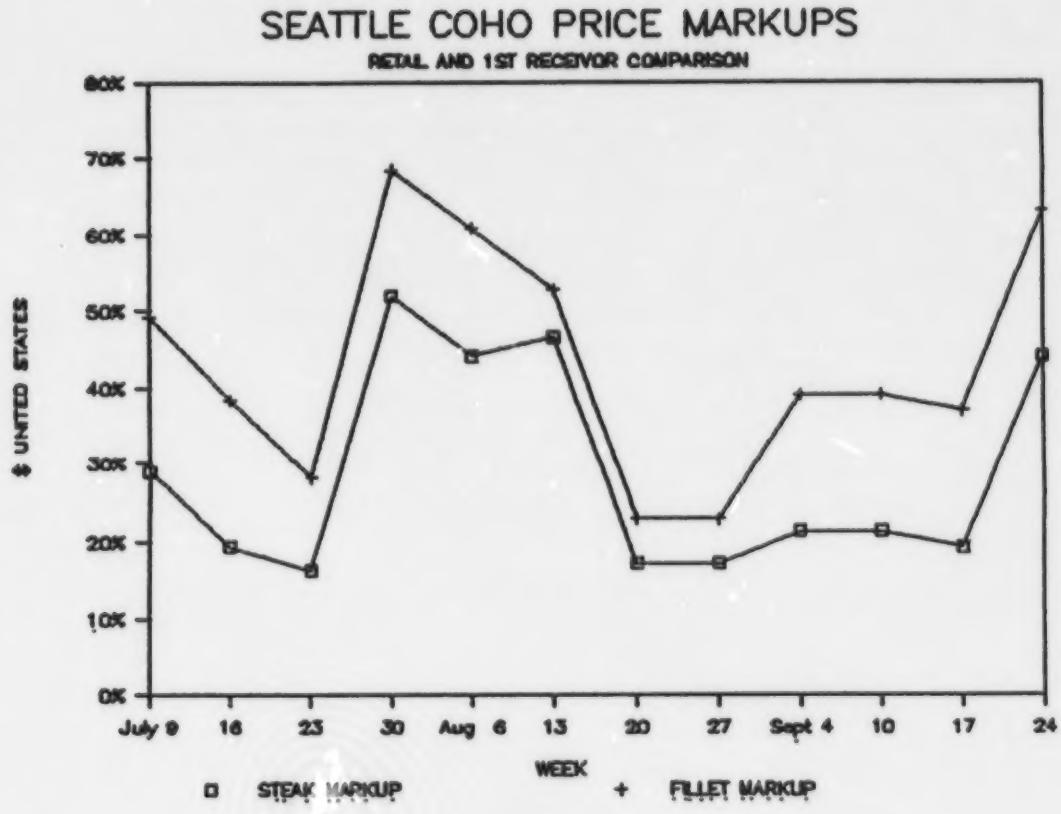
17
24
WEEK
RETAIL PRICES
1ST RECEIVER FILLET PRICES

EXHIBIT 5.15


SEATTLE COHO PRICE MARKUPS
RETAIL AND 1ST RECEIVOR COMPARISON
80%
70%
60%
50%
40%
30%
20%
10%
0%
$ UNITED STATES
July 9
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Aug 6
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Sept 4
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24
WEEK
STEAK MARKUP
FILLET MARKUP

5.4 Los Angeles

There were 4 large retail stores and one speciality seafood store that were surveyed in Los Angeles over the study period. Exhibits 5.16 to 5.18 summarize the average prices obtained from the 4 stores surveyed. Los Angeles chinook steak prices ranged between $8.00 to $8.40/lb. up until the first week of September. Prices dropped the first week of September to $7.00/lb. and slowly rebounded by the end of the month back up over $8.00/lb. Chinook fillet prices in Los Angeles exhibited a similar price trend. Prices were between $8.90 to $9.20/lb. up until the first week of September. Fillets then dropped $1.00/lb. the first week of September and slowly rebounded to back up over $9.00/lb. by the end of September.

Los Angeles steak and fillet prices for chinook salmon were generally $1.00/lb. greater than in Seattle during the July to August 31 period. The price drop the first week of September in Los Angeles corresponds to the beginning of larger volumes of salmon from the Alaska troll fishery.

Exhibit 5.18 displays the total price mark-ups from the first receiver steak and fillet prices to their corresponding retail prices. Mark-ups ranged from 65% to 95% for steaks and 80% to 110% for fillets. Mark-ups were highest during the August period when chinook prices were at their lowest.

One large Los Angeles retailer displayed Norwegian Atlantic salmon over the study period (prices are shown in Exhibit 5.19). Atlantic salmon steak and fillet prices were generally cheaper than those for chinook salmon. Atlantic salmon steak prices ranged from $6.00 to $7.00/lb. for most of the summer while fillet prices ranged from $7.00 to $8.00/lb. for the same period. Atlantic salmon steak and fillet prices increased the last week of September by $1.00/lb.

5.5 San Francisco

Three large retail chains were included in the San Francisco weekly price survey as well as three speciality seafood stores. Results are shown in Exhibits 5.20 to 5.22. Exhibit 5.20 to 5.22 displays the chinook salmon price results. Again, the overwhelming majority of the salmon was found to be wild chinook salmon from Alaska, as well as from the California troll fishery. Chinook steak prices ranged between $7.00 to $8.00/lb. during the July through to mid-September period. Chinook steak prices increased the last two weeks of the survey to $9.50/lb. Fillet prices ranged between $8.00 to $9.00/lb. during the July to mid-September period, rising to $10.50/lb. by the end of September. Exhibit 5.22 shows the price mark-ups at the retail level compared to the first receiver steak and fillet prices. The steak price mark-ups ranged from 50% to 60% during July and by the end of September were at over 90%. Fillet price mark-ups were 65% to 75% in July and were over 110% by the end of September.

Coho prices were significantly lower than the chinook prices in San Francisco. Retail coho steak prices were between $5.00 to $6.00/lb. for most of the summer, increasing to over $6.00/lb. by the end of September. Fillet prices ranged between $6.50 to $7.50/lb. for the July to mid-September period, rising to nearly $8.00/lb. by the end of September.

EXHIBIT 5.16

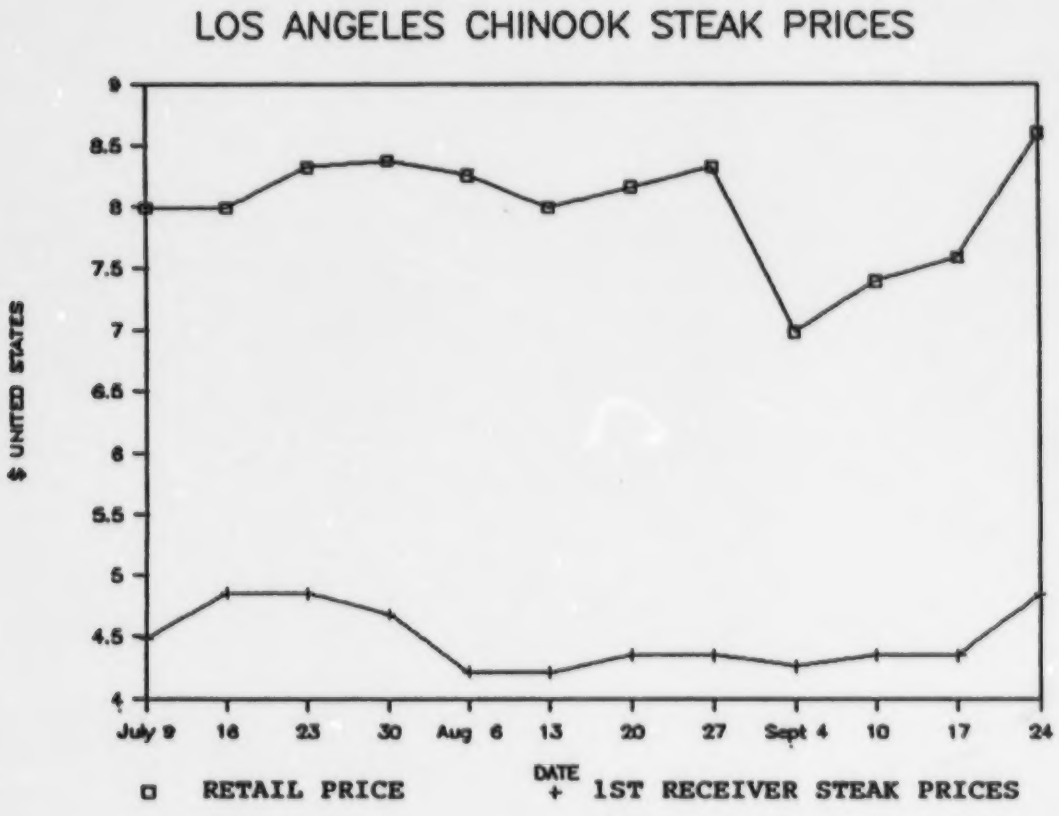

LOS ANGELES CHINOOK STEAK PRICES
$ UNITED STATES
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
July 9
16
23
30
Aug 6
13
20
27
Sept 4
10
17
24
DATE
RETAIL PRICE
1ST RECEIVER STEAK PRICES

EXHIBIT 5.17

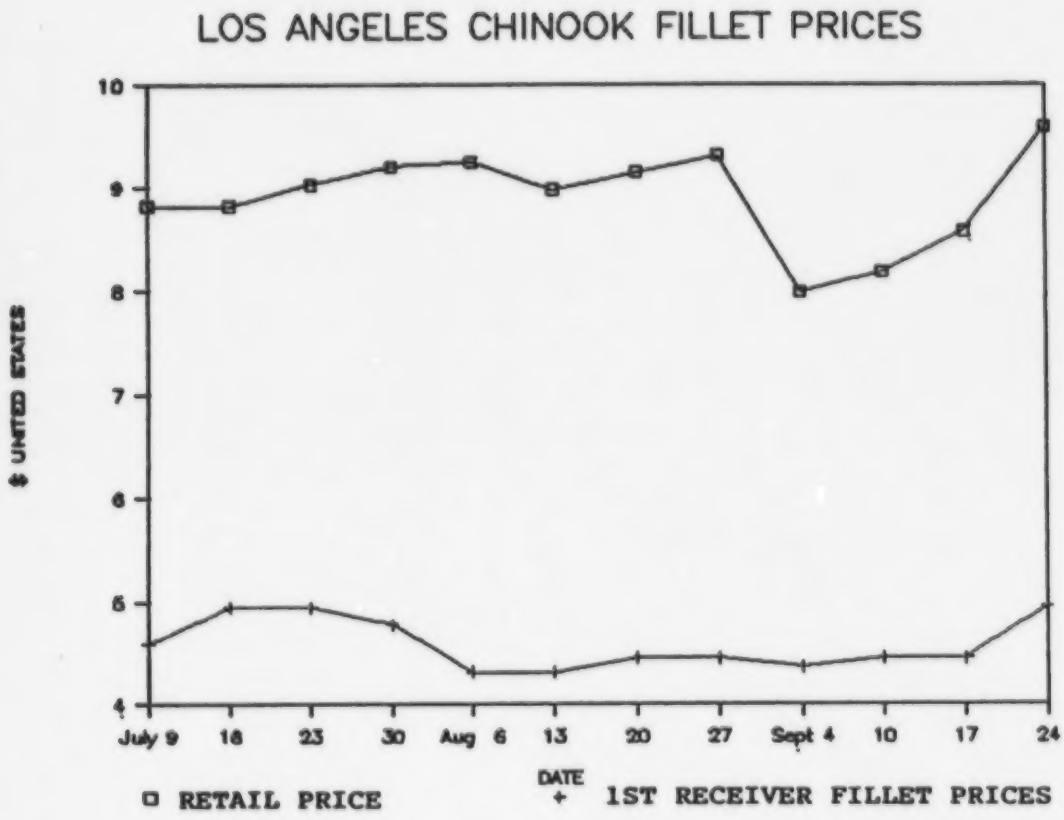

LOS ANGELES CHINOOK FILLET PRICES
$ UNITED STATES
10
9
8
7
6
5
4
July 9
16
23
30
Aug 6
13
20
27
Sept 4
10
17
24
DATE
RETAIL PRICE
1ST RECEIVER FILLET PRICES

EXHIBIT 5.18

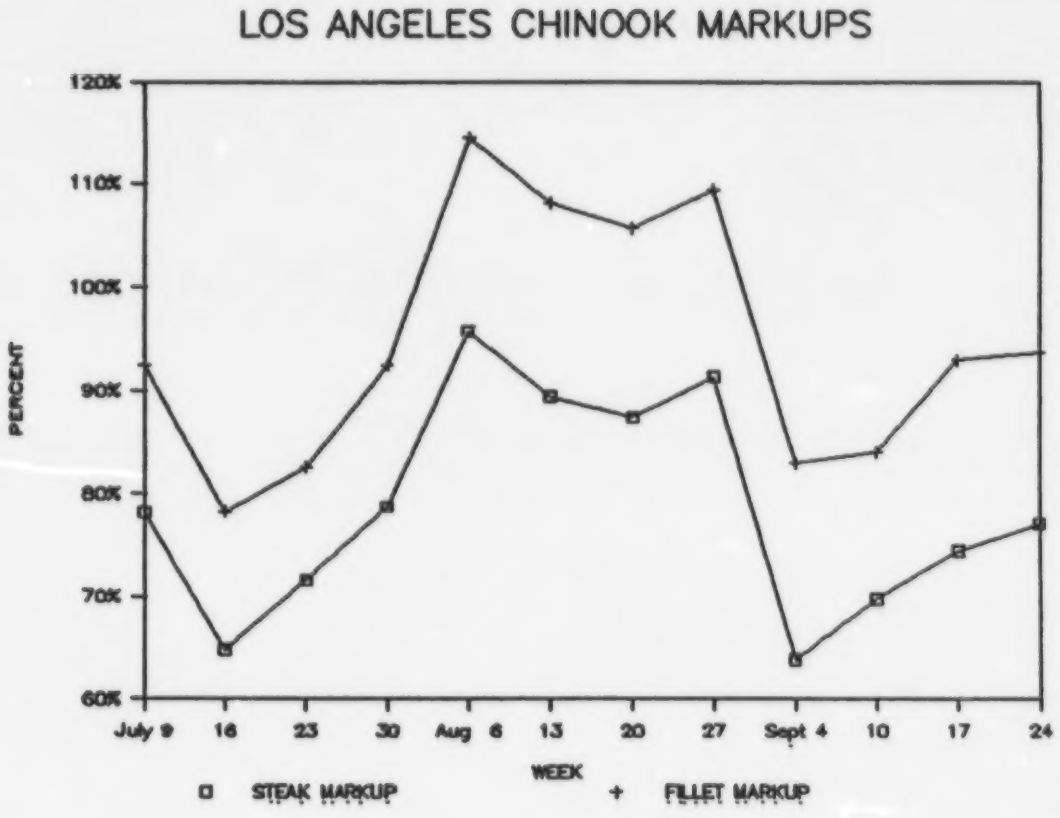

LOS ANGELES CHINOOK MARKUPS
120%
110%
100%
90%
80%
70%
60%
PERCENT
July 9
16
23
30
Aug 6
13
20
27
Sept 4
10
17
24
WEEK
STEAK MARKUP
FILLET MARKUP

EXHIBIT 5.19

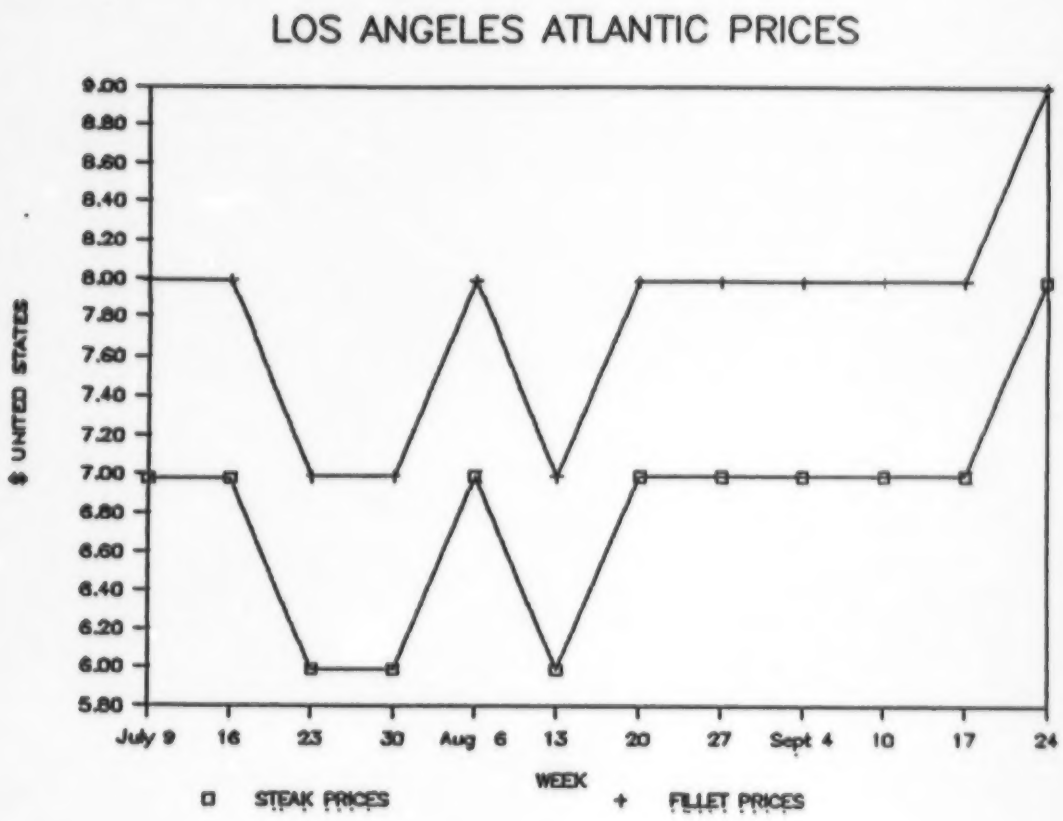

LOS ANGELES ATLANTIC PRICES
$ UNITED STATES
9.00
8.80
8.60
8.40
8.20
8.00
7.80
7.60
7.40
7.20
7.00
6.80
6.60
6.40
6.20
6.00
5.80
July 9
16
23
30
Aug 6
13
20
27
Sept 4
10
17
24
WEEK
STEAK PRICES
FILLET PRICES

EXHIBIT 5.20

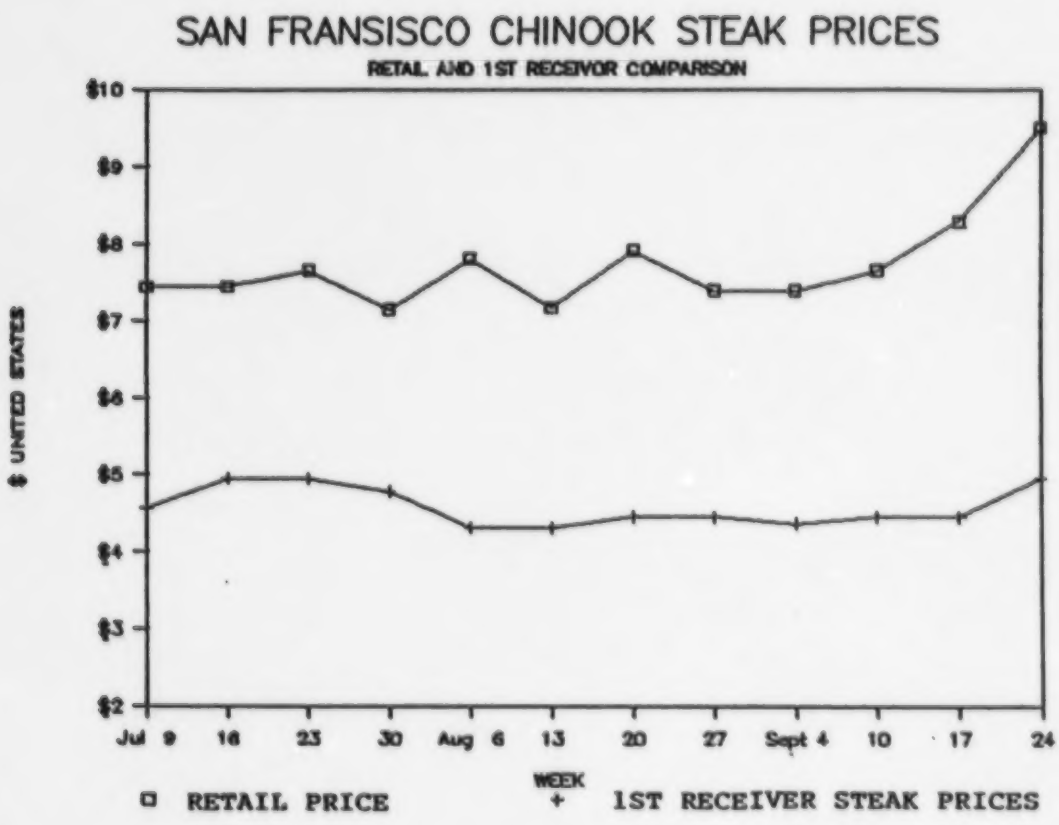

SAN FRANSISCO CHINOOK STEAK PRICES
RETAIL AND 1ST RECEIVOR COMPARISON
$ UNITED STATES
$10
$9
$8
$7
$6
$5
$4
$3
$2
Jul 9
16
23
30
Aug 6
13
20
27
Sept 4
10
17
24
WEEK
RETAIL PRICE
1ST RECEIVER STEAK PRICES

EXHIBIT 5.21

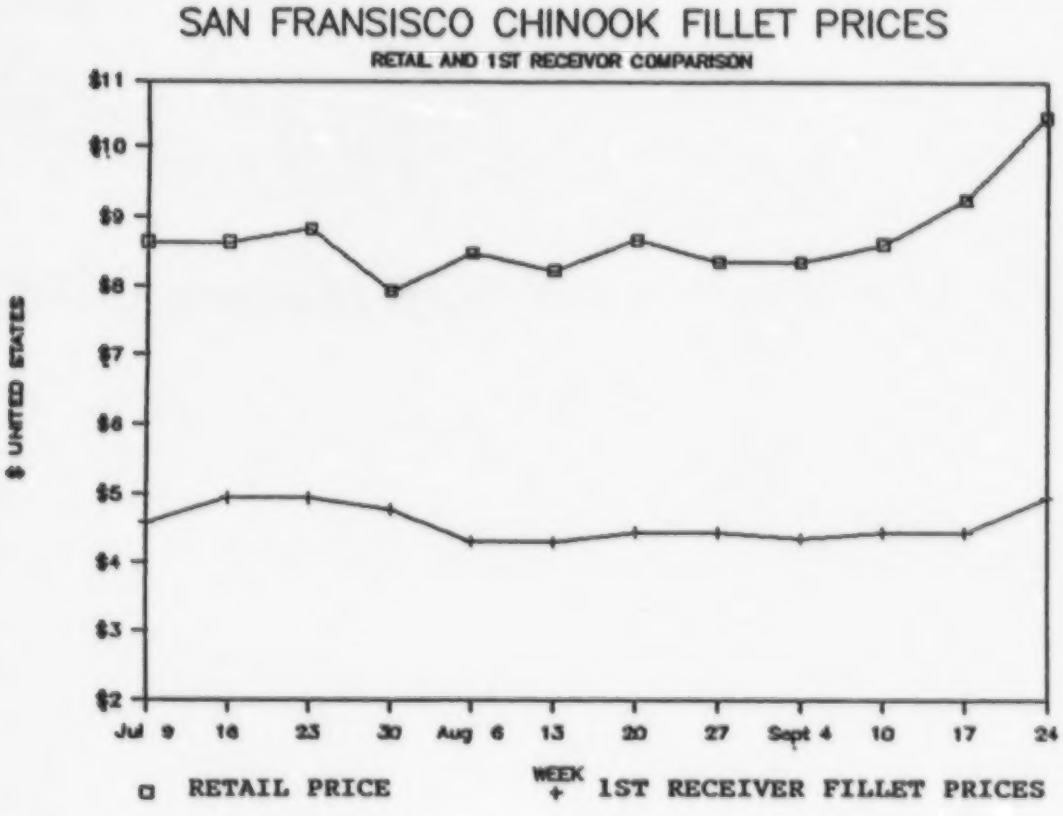

SAN FRANSISCO CHINOOK FILLET PRICES
RETAIL AND 1ST RECEIVOR COMPARISON
$ UNITED STATES
$11
$10
$9
$8
$7
$6
$5
$4
$3
$2
Jul 9
16
23
30
Aug 6
13
20
27
Sept 4
10
17
24
WEEK
RETAIL PRICE
1ST RECEIVER FILLET PRICES

EXHIBIT .5.22

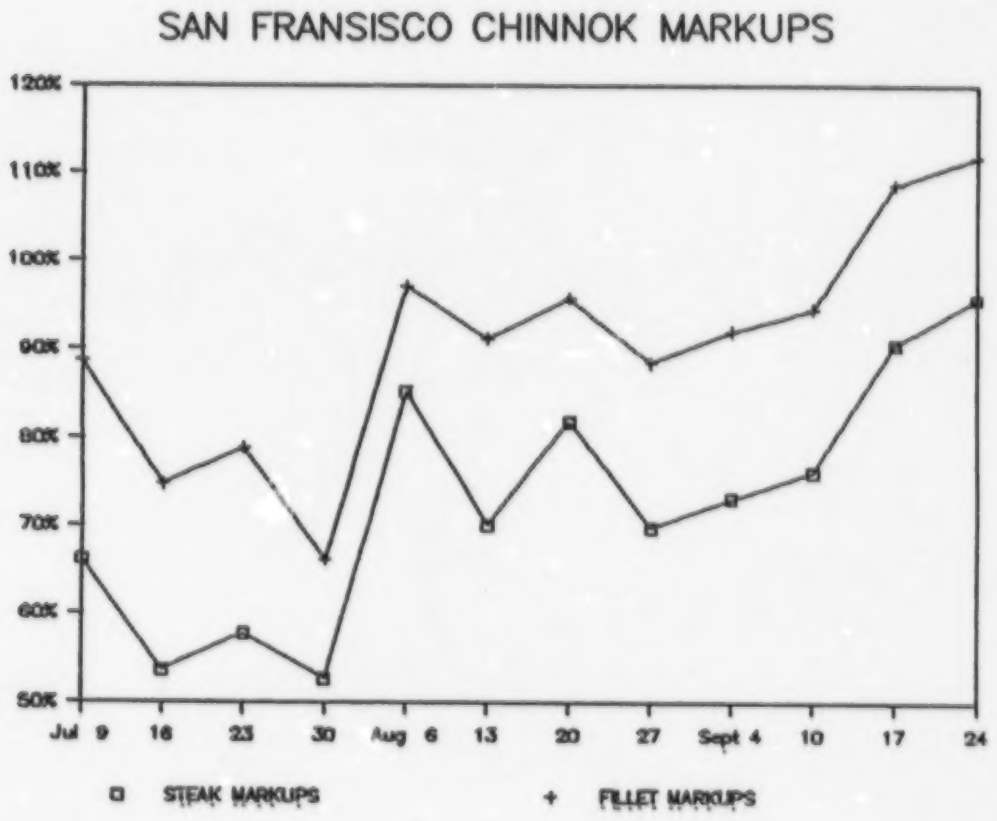

SAN FRANSISCO CHINNOK MARKUPS
120%
110%
100%
90%
80%
70%
60%
50%
Jul 9
16
23
30
Aug 6
13
20
27
Sept 4
10
17
24
STEAK MARKUPS
FILLET MARKUPS

EXHIBIT 5.23

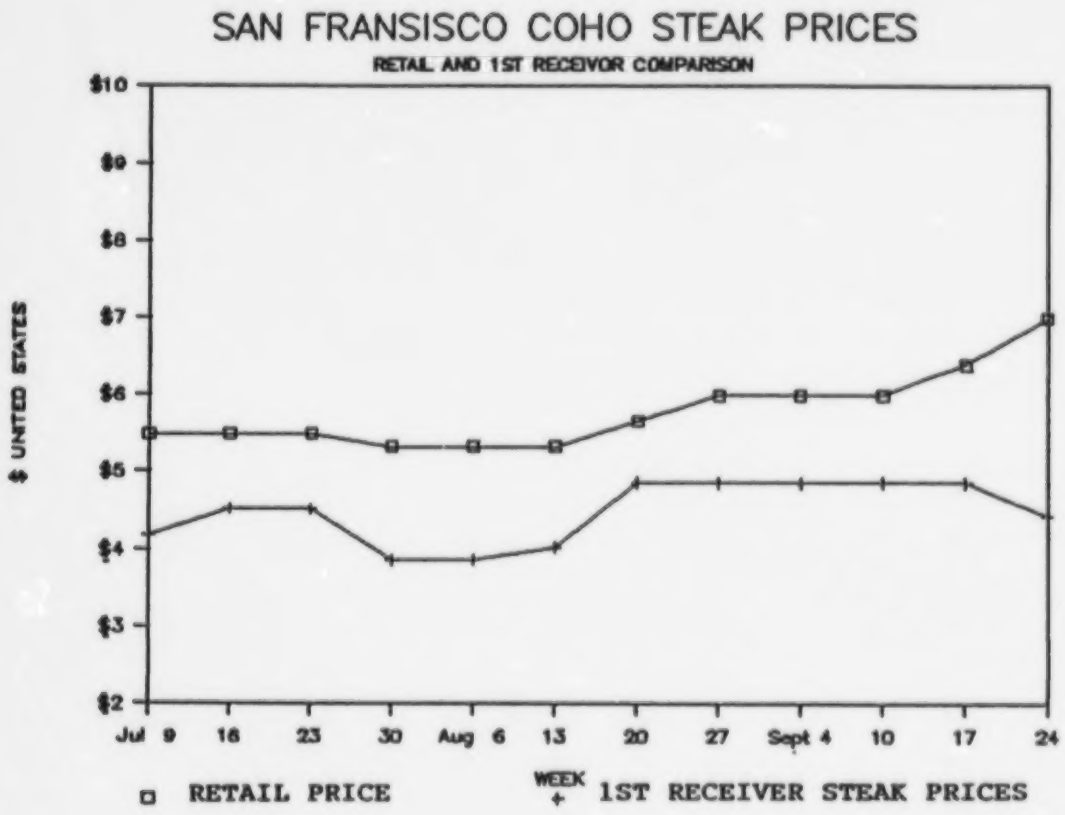
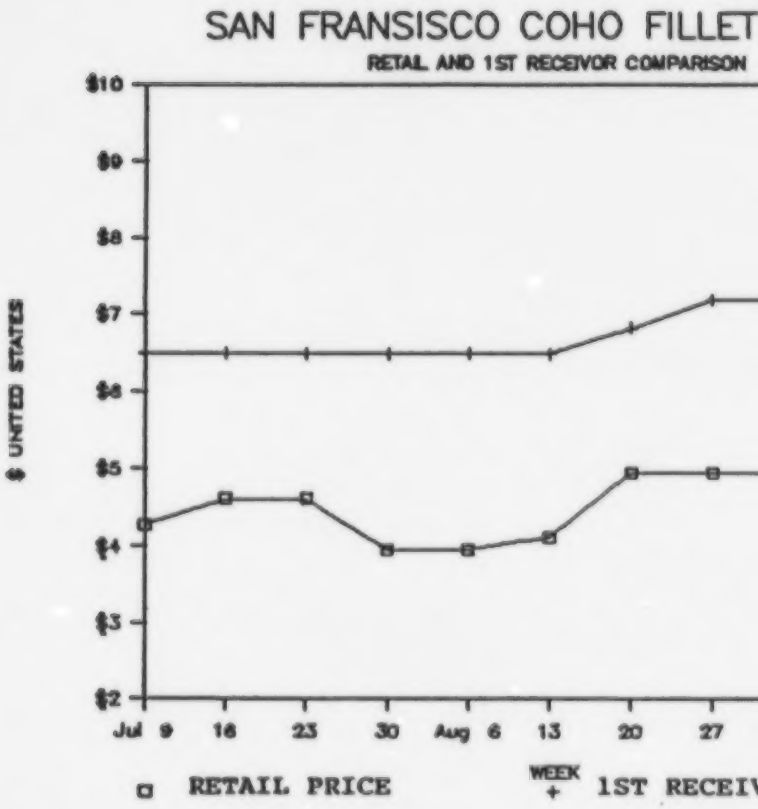
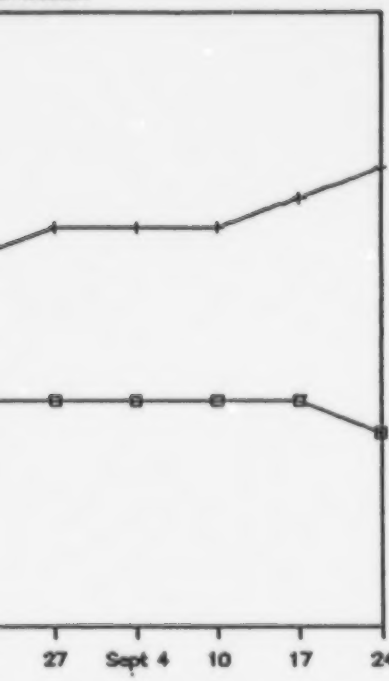

SAN FRANSISCO COHO STEAK PRICES
RETAIL AND 1ST RECEIVOR COMPARISON
$ UNITED STATES
$10
$9
$8
$7
$6
$5
$4
$3
$2
Jul 9
16
23
30
Aug 6
13
20
27
Sept 4
10
17
24
WEEK
RETAIL PRICE
1ST RECEIVER STEAK PRICES

EXHIBIT 5.24


SAN FRANSISCO COHO FILLET
RETAIL AND 1ST RECEIVOR COMPARISON
$ UNITED STATES
$10
$9
$8
$7
$6
$5
$4
$3
$2
Jul 9
16
23
30
Aug 6
13
20
27
WEEK
RETAIL PRICE
1ST RECEI

FILLET PRICES

MPARISON



RECEIVER FILLET PRICES

EXHIBIT 5.25

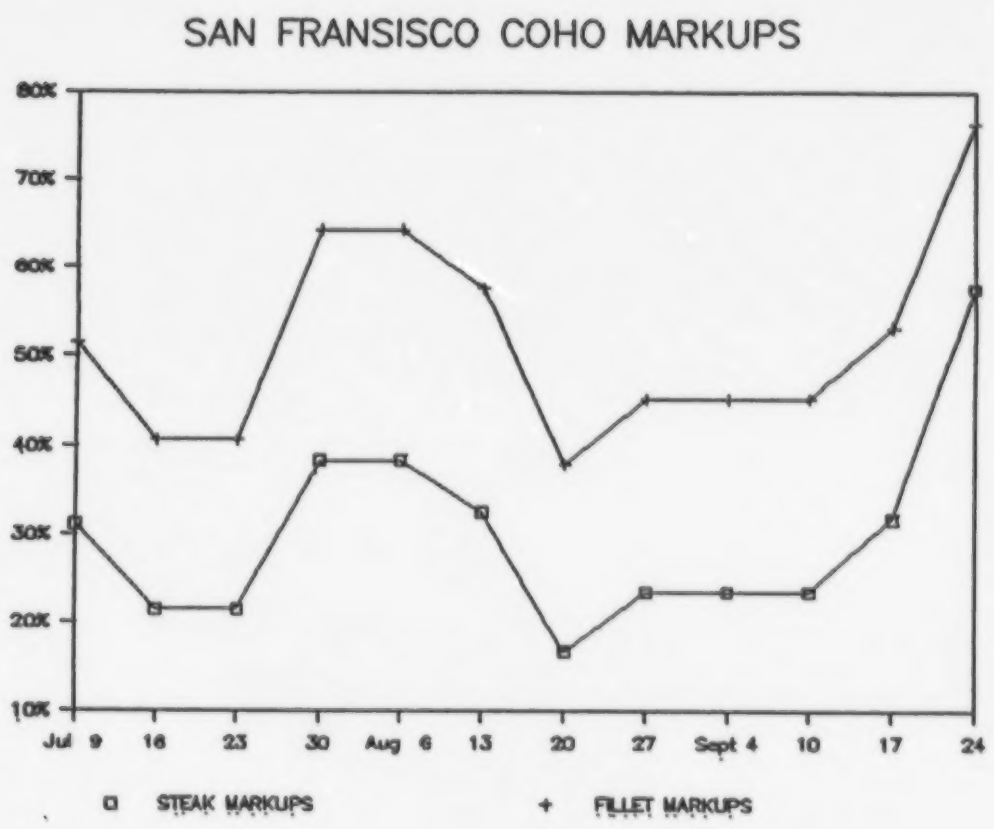
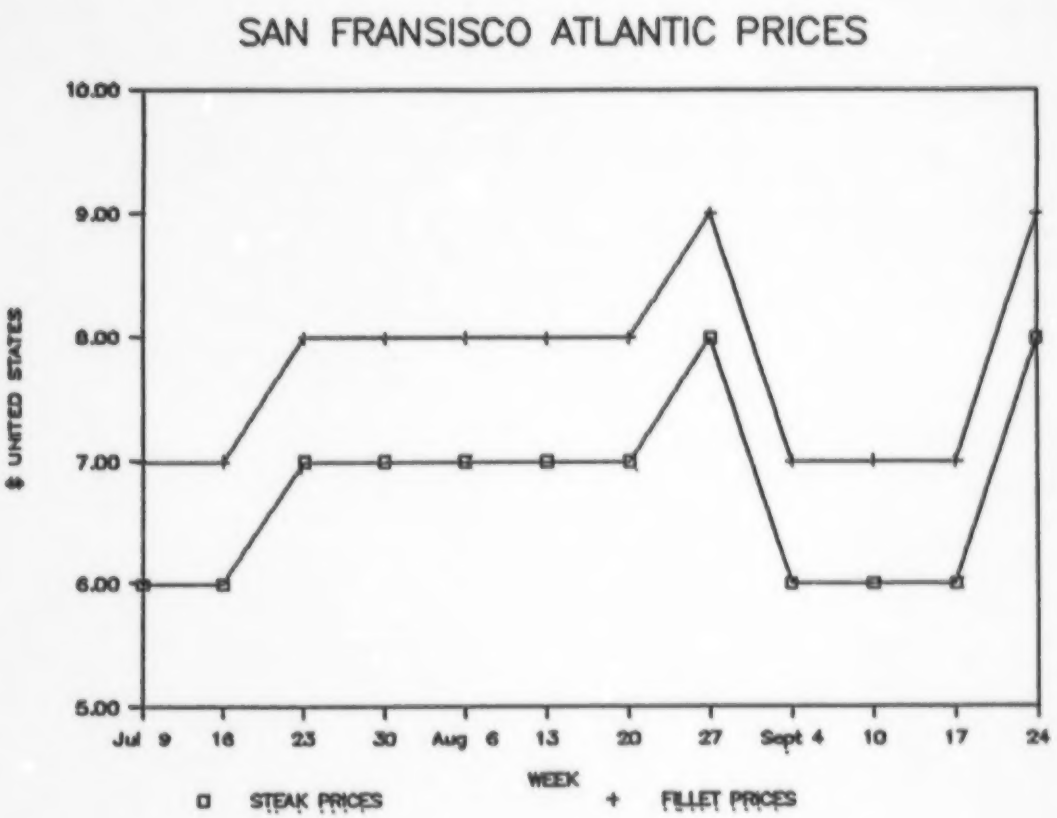

SAN FRANSISCO COHO MARKUPS
80%
70%
60%
50%
40%
30%
20%
10%
Jul 9
16
23
30
Aug 6
13
20
27
Sept 4
10
17
24
STEAK MARKUPS
FILLET MARKUPS

EXHIBIT 5.26


SAN FRANSISCO ATLANTIC PRICES
10.00
9.00
8.00
7.00
6.00
5.00
$ UNITED STATES
Jul 9
16
23
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Aug 6
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Sept 4
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17
24
WEEK
STEAK PRICES
FILLET PRICES

Price mark-ups for coho salmon steaks and fillets in San Francisco compared to the first receiver prices are shown in Figure 5.25. Steak mark-ups ranged for most of the summer between 20% to 40% while fillet price mark-ups ranged between 40% to 60% for the same period.

Two San Francisco retailers carried Norwegian Atlantic salmon over the summer period. Their averaged prices are shown in Exhibit 5.26. Steak prices ranged over the summer period between $6.00/lb. to $8.00/lb. while fillet prices ranged from $7.00/lb. to $9.00/lb.

5.6 Chicago

The two major retail chains in Chicago, Jewel Food Stores and Dominiques, were surveyed for their salmon prices over the study period. The average prices from these stores are presented in Exhibits 5.27 to 5.29.

Chinook steak prices ranged between $5.50 to $6.00/lb. during the July period and then rose to over $7.00/lb. by late August and again by the end of September to $8.00/lb. Fillet prices were marginally more and followed a similar pattern. Exhibit 5.29 presents the percent mark-up of the first receiver price for steaks and fillets to the selling retail price. Mark-ups were relatively low during the month of July and ranged between 20% to 45%. Mark-ups increased significantly during the month of August, peaking the first week of September at 70% and 95% for steaks and fillets respectively.

Other species of salmon such as chum and sockeye were periodically available during the course of the summer and were not available on a consistent basis to provide a significant number of observations to report graphically.

EXHIBIT 5.27

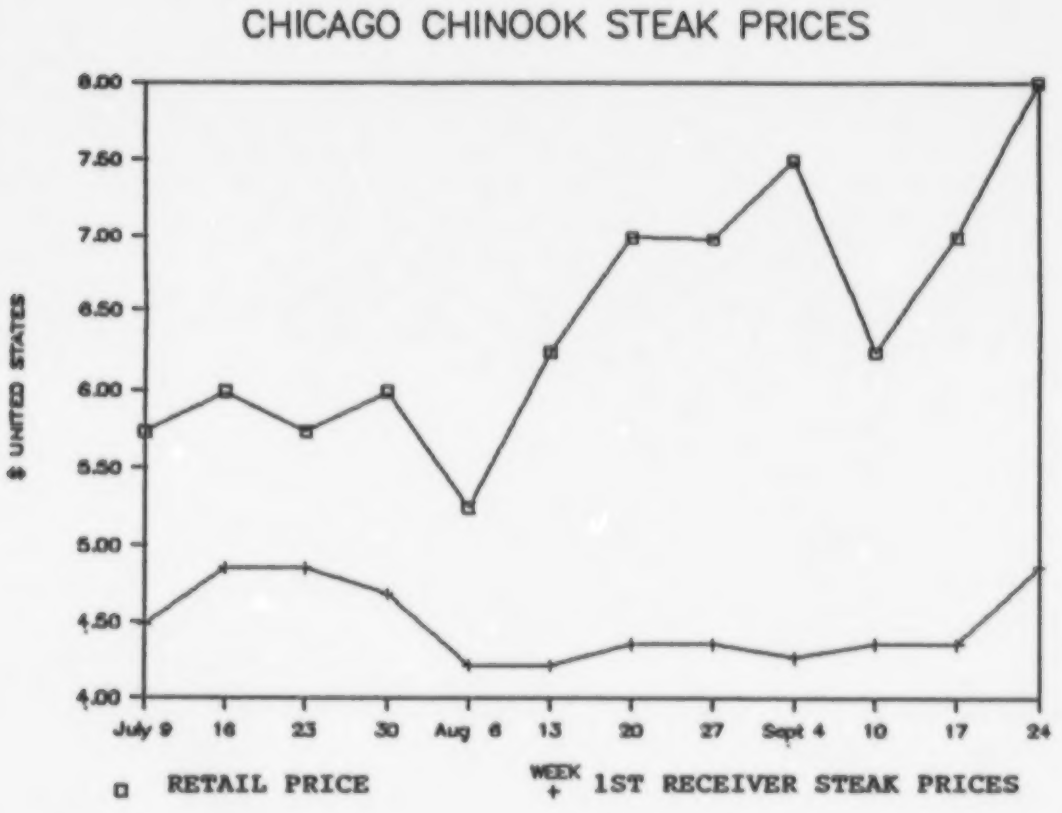

CHICAGO CHINOOK STEAK PRICES
$ UNITED STATES
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
July 9
16
23
30
Aug 6
13
20
27
Sept 4
10
17
24
WEEK
RETAIL PRICE
1ST RECEIVER STEAK PRICES

EXHIBIT 5.28

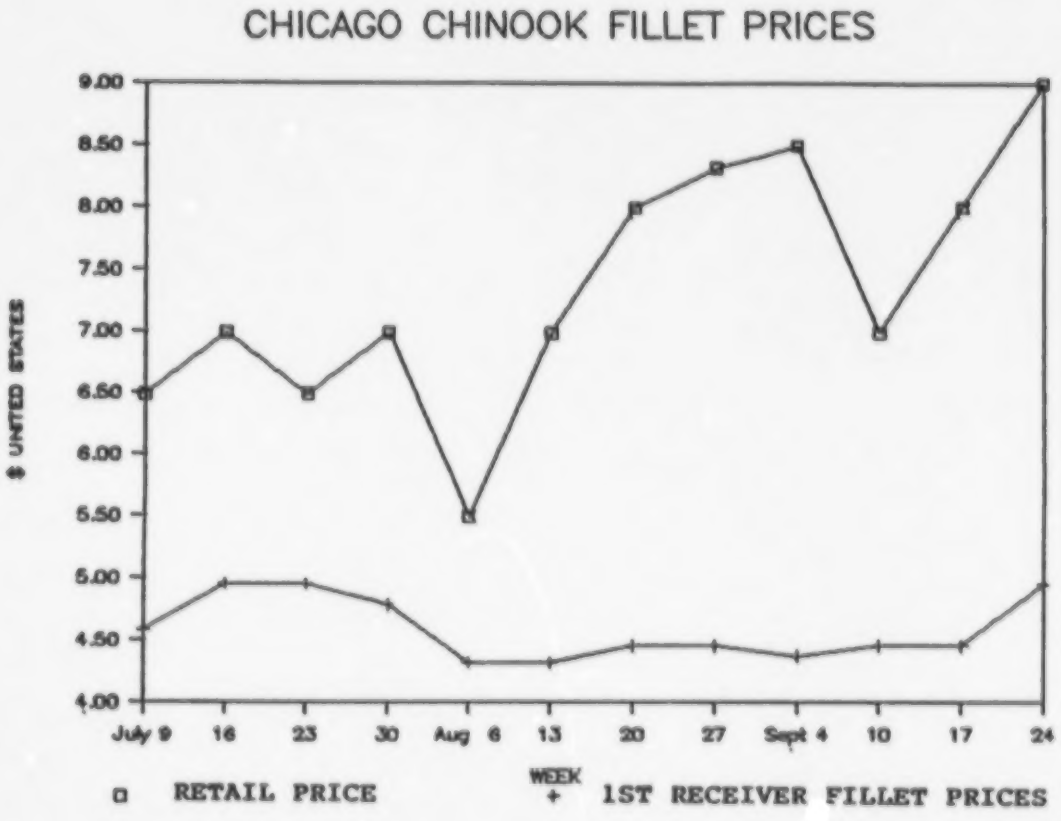
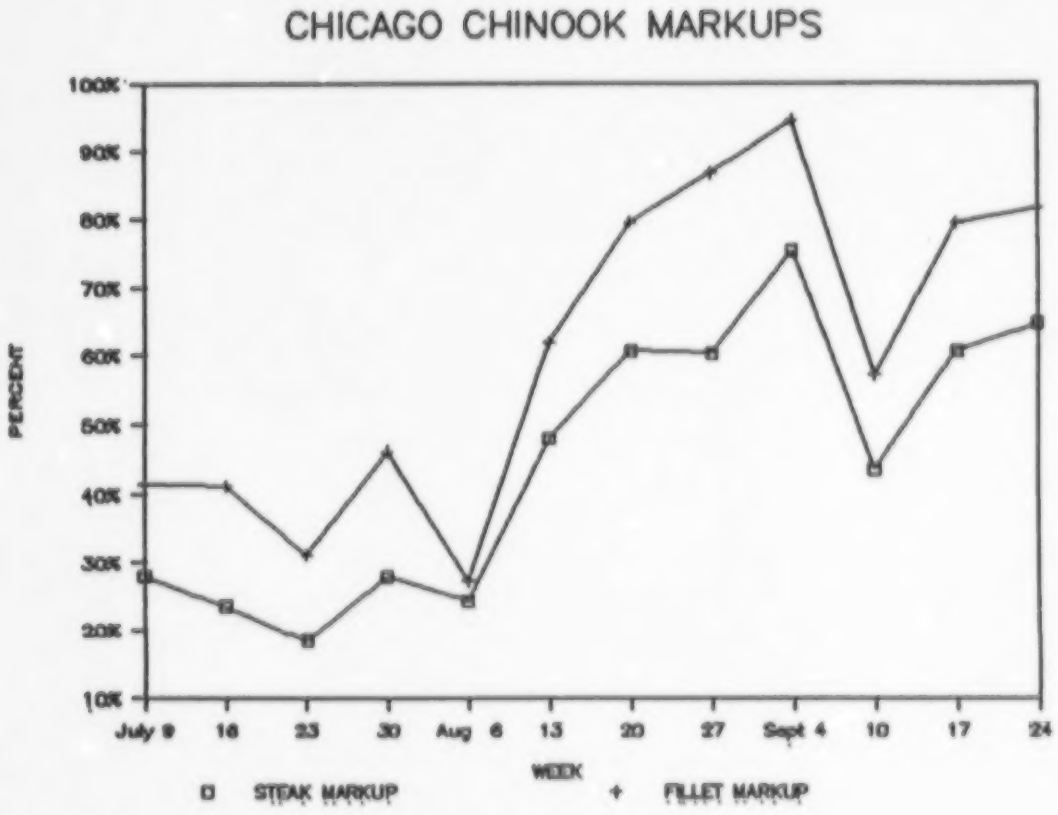

CHICAGO CHINOOK FILLET PRICES
$ UNITED STATES
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
July 9
16
23
30
Aug 6
13
20
27
Sept 4
10
17
24
WEEK
□ RETAIL PRICE
+ 1ST RECEIVER FILLET PRICES

EXHIBIT 5.29


CHICAGO CHINOOK MARKUPS
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
PERCENT
July 9
16
23
30
Aug 6
13
20
27
Sept 4
10
17
24
WEEK
STEAK MARKUP
FILLET MARKUP

6.0 SUMMARY

6.1 Price Collection Methodologies

This study has evaluated a wide variety of price gathering procedures for fresh salmon products at different points in the seafood distribution system. This distribution system is currently undergoing a number of transformations as increased demand, greater supply predictability and high quality consistency continues for aquaculture products. There is a definitive trend towards a reduction in the number of levels between the producer and the consumer.

It was found that gathering prices at the first receiver level was currently being performed by the B.C. Salmon Farmers Association's Price and Volume Reporting System and Urner Barry Publications Inc. Both these price and volume reporting systems are able to provide a reasonably accurate portrayal of what the first receiver selling price of farmed salmon products are on a weekly basis. The U.S. National Marine Fisheries Service also has a price reporting system, but is generally not regarded as very accurate by industry analysts.

Several price tracking exercises were also carried out. These involved essentially following a shipment of B.C. farmed salmon through the seafood distribution system to the final point of sale. This was found to be an extremely useful exercise in that the mark-ups of the product through the distribution system could be quantified with a relative degree of accuracy. It was also able to provide a better idea of the typical distribution channels for the product. This exercise highlighted the shortening of the distribution links between the retail sector and first receivers. Price tracking can be carried out on a periodic basis (i.e. once a month for several shipments). This method will be very useful in further identifying other distribution channels of B.C. farmed salmon as the product moves into wider geographic distribution.

A.C. Neilsen Market Research was also found to be a very useful tool in determining retail prices and also in identifying how B.C. farmed salmon is advertised in the marketplace. It is also beneficial in determining the relative percentage of salmon that is sold as a whole, steak or fillet product. Neilsen in-store observations will be a service to utilize on a periodic basis (i.e. once every four months) to check on what the retail price structure is, particularly in the off-season of the wild fishery, in our major target cities.

Obtaining retail price information by telephone surveys was found to be the most useful and practical method for price collection. This price collection methodology was found to be relatively easy once initial contact was made with the seafood counter. It was discovered that many retail seafood counters still have relatively untrained personnel working at them who are not well informed about the salmon farming industry and the wild fishery. Using these people for product identification was found to be difficult. However, this method is still a valuable one in collecting not only price information but a variety of other ancillary information on supply and distribution of the product to large retailers.

Newspaper advertisement collection was also evaluated. A major drawback was the infrequency of available data. However, several of the advertisements found did distinguish between farmed and wild salmon. These advertisements showed the level of promotion of seafood that is now being conducted by retailer, especially in the United States, is increasing. Many retailers have invested heavily in full-service retail counters and are anxious to feature them to the fullest as one of their store attractions.

Obtaining restaurant purchasing prices of salmon was found to be extremely difficult for a variety of reasons. Most chefs typically look after the purchasing requirements for all items on the menu. They were not able to report over the telephone accurate buying prices of farmed salmon because of the variety of other products they purchase daily. The Chefs were often extremely busy and were unable to speak at any length on the telephone. However, other valuable information can be gathered from chefs with respect to their familiarity of B.C. farmed salmon and their impressions of the product.

A wholesaler survey was also conducted where wholesalers /distributors in the target cities were contacted and asked several questions regarding the typical selling prices of B.C. farmed salmon to the food service sector. This was unsuccessful because of the inherent reluctance on the part of the wholesalers to provide any price information. However, other valuable information with respect to wholesalers impression of the product can be gathered as well as problems that they have in sourcing it. The optimal price collection system for fresh salmon products is outlined in Exhibit 6.1.

EXHIBIT 6.1: OPTIMAL PRICE COLLECTION SYSTEM FOR FRESH SALMON PRODUCTS

A) Target Cities for Price Collection

- Vancouver
- Toronto
- Seattle
- San Francisco
- Los Angeles
- Chicago

B) Price Collection System

METHODOLOGY	TIME FRAME OF PRICE COLLECTION
1) First Receiver Price Collection - B.C. Salmon Farmers Association - Urner-Barry	Weekly
2) Price Tracking - Following shipments from first receiver to end-user to determine mark-ups	Monthly
3) Retail In-Store Observations - Conducted by A.C. Nielson Company	Quarterly
4) Retail Price Telephone Survey	Monthly

It is clear as the industry moves into more downstream marketing that the continuation and expansion of price collection systems will become an increasingly important component of the salmon farming industry's market intelligence system. This study provided a useful overview as to which price collection methodologies would prove most feasible in this important area.

6.2 Price and Mark-up Analysis

This study was very useful in showing what the relative mark-ups through the distribution system were for fresh salmon over the summer 1990 study period. This was accomplished by tracking first receiver and retail consumer prices in conjunction with following B.C. farmed salmon shipments through the distribution system to determine each level's mark-up.

First receiver prices for B.C. farmed salmon began to decline significantly after the July 1 opening of the commercial salmon fishery. Fresh farmed chinook prices dropped 15% for 4 - 6 lb. fish between April to September and 18% for 6 - 9 lb fish. The summer 1990 prices were only marginally higher than the summer 1989 prices, which were the lowest salmon prices in several years.

B.C. farmed salmon prices will continue to be price takers for several reasons. Firstly, the 300,000 tonne annual salmon fishery of North America's west coast ensures that the sheer abundance of fresh salmon in the summer will always depress prices to at least a certain degree. B.C. farmed chinook prices typically dovetail those of the troll chinook salmon during the season. Prices begin to rebound typically by late October or early November.

Secondly, the dramatic increase in world farmed salmon production to over 200,000 tonnes has made this high quality product that once commanded premium prices a commodity-traded product. Farmed salmon can be bought from a variety of producing regions (Norway, Scotland, Chile, British Columbia, New Brunswick, and a host of other smaller regions) which all have large production companies. The intense competition, both internationally and regionally, between individual companies has had a negative impact on prices since the price decline of 1989.

This downward trend in prices, however, has not passed along to the consumer. Retail price monitoring of fresh salmon prices showed that in four of the six cities studied (Vancouver, Toronto, Seattle and San Francisco) chinook steak and fillet prices actually increased between July to the end of September. Chicago and Los Angeles prices both increased steadily over the summer period before a brief one week price drop in early September. In both cities, prices rebounded before the end of September to above where they had been prior to the brief decline.

Vancouver steak prices, for example, increased from $7.50/lb during July and August to over $9.00/lb in September. The first receiversteak prices declined from $5.70/lb in early July to $5.00/lb during August and September. The total mark-up from first receiver to retail price for chinook steaks increased steadily from 30% in July to 80% in late September.

A similar trend in increasing retail prices of fresh salmon products over the summer with a corresponding lowering of first receiver prices was seen in the five other cities. Retailers justify increasing their fresh salmon prices for several reasons.

Many retailers have invested in seafood counters in recent years and clearly want a return on their investment. Seafood counters in some stores are "loss leaders" in that the retailer uses seafood counters to attract consumers to their stores to purchase other goods along with their seafood. However, many seafood counters are still not as profitable as other counters in the store. Even though fresh salmon prices may decline in the summer, retailers maintain or increase their prices to maximize their profit over the year. Also, because salmon is very much a popular summer barbecue food, retailers also wish to capitalize on it. Baby-back ribs are another example of a barbecue food which often increases significantly in price over the summer.

It was evident from this study while the middlemen, brokers and wholesalers certainly try to capitalize on their commissions during the summer, the retailers who apply the final mark-up apportion the greatest mark-ups. Price tracking revealed that retailers typically mark-up a product 25% - 35% if it is an advertised special and 45% - 60% if it is a regular price.Salmon farming companies are attempting to deal more directly with large retail chains in an effort to maximize their share of the distribution system mark-ups. However, there are many large retailers which have long-standing historical relationships with a single large seafood wholesaler. Selling direct to the retailer is almost impossible in such cases, and the best a salmon farming company can do is to supply the wholesalerdirectly. The trend towards shortening of the distribution levels for fresh salmon was clearly shown in this study.

The retail telephone survey also showed the need for the salmon farming industry to move further into direct retail promotions to better educate seafood counter personnel as well as consumers in all aspects of the product's attributes (i.e., health and nutrition benefits, availability, country source, safety, etc.,) Developing these relationships with retailers is a critical first step that must be undertaken before any real discussions on price strategies with retailers can be undertaken.

By strengthening the industry's working relationship with retailers in this manner, price sensitivity studies could be conducted in considerable detail with large retailers. Salmon has been shown to be quite price sensitive. Results of such studies could be used to show retailers that greater volumes of fresh salmon could be sold at a reduced price level that would still be profitable for both retailers and salmon farming companies. Short-term prospects for retail price structure modifications are unlikely, as the salmon farming industry still must further cultivate their relationship with retailers before this can occur.

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Peterson, Glen, 1989. The Fresh Fish Distribution Industry In Ontario: Implications for B.C. Fresh Salmon Marketing; Department of Fisheries and Oceans, Economic and Commercial Analysis Report No. 55

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